

**THE RAILWAY GAZETTE**  
A Journal of Management, Engineering and Operation  
INCORPORATING  
Railway Engineer • TRANSPORT • The Railway News  
The Railway Times • Herapath's Railway Journal • RAILWAY RECORD.  
RAILWAYS • ESTABLISHED 1835 • RAILWAY OFFICIAL GAZETTE

PUBLISHED EVERY FRIDAY  
AT  
33, TOTHILL STREET, WESTMINSTER, LONDON, S.W.1  
Telegraphic Address: "TRAZETTE, PARL, LONDON"  
Telephone No.: WHITEHALL 9233 (6 lines)

Annual subscription payable in advance and postage free  
British Isles and Abroad ..... £2 5s. 0d.  
Single Copies ..... One Shilling  
Registered at the General Post Office, London, as a Newspaper

VOL. 69. No. 25

FRIDAY, DECEMBER 16, 1938

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#### The Late Mr. J. H. Follows

THE passing on Tuesday of Mr. J. H. Follows removes a personality who, above all things, was 100 per cent. a railwayman. His father, Mr. A. Follows, served the Midland Railway for 40 years; Mr. J. H. Follows, himself, all but completed 42 years with the Midland Railway and the L.M.S.R., and if his directorships of associated companies be included he may be considered as having remained in harness up to the date of his death and therefore to have served for no fewer than 48 years. In February, 1932, when we referred to his retirement from the vice-presidency of the L.M.S.R., we pointed out that the combined service of Mr. J. H. Follows, his three brothers, and their father then made a total of 200 years. It is difficult to select from a career of such length and variety as he had any particular phase for special mention, but Mr. J. H. Follows will always be remembered for his work in connection with the introduction of the Midland Railway traffic control. In this he was a personal associate of, and the immediate assistant to, the late Sir Cecil Paget, and was generally regarded as his successor in operational methods. The detailed care which Mr. Follows devoted to his work formed the basis of his success, and tribute to this is paid by Sir Guy Granet in an appreciation we publish on page 1059. Mr. Follows's retirement in 1932 was a retirement in name only as it merely furnished him with more time to devote to those outside interests which made him a very well-known figure in Derbyshire circles. Perhaps no finer tribute could be paid than the following remark of Lord Stamp: "John Follows was beloved of all who knew him, for he had a great, simple, generous, yet shrewd approach to life and all its problems. He was a great colleague and a greater friend. . . . He was indeed one of nature's gentlemen."

#### Railway Co-operation

Advocacy of railway nationalisation is based on numerous arguments and emotions, among which the bountiful (more money for all) and the Quixotic (less money for those who do not deserve it) would probably make a good showing were a referendum to be taken. Often, however, it is urged that the bringing of all railways under one control would have the practical effect of facilitating the alternative routing of traffic should an important route be blocked by an accident or other cause. There is, however, already a far closer co-operation between the railways as at present managed than the sponsors of this argument may realise. An example at once to hand is provided by the events of November 25, when, as recorded in our issue of December 2, the electric power signalling at Paddington station, G.W.R., was put out of action by a fire in the arrival signal box. Among the first steps taken to meet the emergency situation, the duration of which could not first be estimated precisely, was a very early approach to the L.N.E.R., with a view to assistance being rendered, if the situation necessitated it. Prompt arrangements were made to see that the "King" class locomotives did not overstress the under-bridges, and an actual try-out of this class of locomotive was made between Northolt junction and Marylebone to test the clearances. In addition the timetable staff examined and worked out the necessary details for the diversion into Marylebone of the main-line and more important local services which passed over the G.W. & G.C. Joint line.

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#### The Week's Traffics

For the year to date the traffics of the four main-line railways show a combined decrease of £6,467,000 or 4.17 per cent. in comparison with those for the first 49 weeks of 1937. The decline in the past week was £266,000 following one of £319,000 in the 48th week.

	49th Week				Year to date	
	Pass., &c.	Goods, &c.	Coal, &c.	Total	Inc. or Dec.	%
L.M.S.R. ..	6,000	87,000	16,000	109,000	2,927,000	-4.67
L.N.E.R. ..	11,000	65,000	30,000	106,000	2,227,000	-4.84
G.W.R. ..	4,000	26,000	18,000	48,000	1,133,000	-4.33
S.R. ..	1,000	3,000	1,000	3,000	180,000	-0.88

A comparison of the 1938 receipts with those for the corresponding periods in 1936 is made in the following table:—

	49th Week				Year to date	
	Pass., &c.	Goods, &c.	Coal, &c.	Total	Inc. or Dec.	%
L.M.S.R. ..	7,000	67,000	15,000	45,000	198,000	-0.33
L.N.E.R. ..	2,000	42,000	10,000	54,000	58,000	-0.13
G.W.R. ..	5,000	25,000	9,000	29,000	237,000	+0.95
S.R. ..	10,000	8,500	2,500	1,000	657,000	+3.34

The net advance of £638,000 in the aggregate figures of 1938 over those of 1936 is made up of increases of £2,665,000 under passengers and of £868,500 under coal, less a decrease of £2,895,500 under merchandise.

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#### Cordoba Central Railway

As the operating management of this company's railway and that of its subsidiary, the Rafaela Steam Tramway Company, was taken over on February 1, 1938, by the Argentine State Lines for a period of four years, the accounts for the year ended June 30 last are in respect of seven months under the company's own management and in respect of five months under State Railway management. The rentals payable by the State Lines under the working agreement are £380,000 per annum for the first three years and a modified rental for the fourth year, subject to an allowance to the State Lines of up to \$700,000 (£37,000 at the current rate of exchange) per annum for renewals. Net earnings for the seven months.

at par of exchange, were £137,921, and the rental for the five months, less administration expenses, &c., was £119,326. After charging exchange differences £95,173, provision for renewals £19,124, 12 months' accrued interest (£360,000) on the 4½ per cent. debenture stock, and other items, the result is a debit balance of £219,968. The Bill authorising the Argentine Government to purchase the company's undertaking and that of its subsidiary for £9,500,000, payable as to £8,800,000 nominal in Argentine State Railways sterling bonds, and as to £700,000 sterling in cash, plus a sum in respect of stores on hand, was sanctioned by the Chamber of Deputies on September 2, and is to be considered by the Senate at an extraordinary Session of Congress now being held. The working agreement terminates if and when the purchase agreement becomes definitive.

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### Overseas Railway Traffics

On some of the Argentine railways the traffic position has improved during the past fortnight. The Buenos Ayres & Pacific has reduced its decrease by £13,585, the Buenos Ayres Great Southern by £8,623, and the Buenos Ayres Western by £8,437. So far the improvement has not reached the Central Argentine which was £26,281 down during the past two weeks. Entre Rios receipts improved by £2,977 during the fortnight and are now £45,397 up.

	No. of Weekly Week Traffics	Inc. or Decrease	Aggregate Traffic	Inc. or Decrease	
Buenos Ayres & Pacific ..	24th	85,670	+ 7,503	1,727,919	- 149,534
Buenos Ayres Great Southern ..	24th	133,600	- 2,730	2,923,945	- 22,519
Buenos Ayres Western ..	24th	54,218	+ 7,692	960,980	- 127,172
Central Argentine ..	24th	105,124	- 19,178	2,417,854	- 604,483
Canadian Pacific ..	49th	588,800	+ 15,600	26,649,000	- 488,800
Bombay, Baroda & Central India	34th	235,550	- 11,325	5,671,050	- 86,850

Canadian Pacific receipts have increased by £29,800 in the past two weeks.

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### Reopening an Historic Swiss Spur

Our Swiss correspondent refers on page 1040 this week to the reopening of the Seebach-Oerlikon spur line during the forthcoming Zurich Exhibition to enable east-west goods traffic to avoid Zurich. This short section of line has an historic interest, in that it was originally an essential part of an ambitious scheme to provide an independent east-west route in competition with the main line of the Nordostbahn and the Centralbahn from Zurich to Olten and western Switzerland. The scheme was promoted by the Nationalbahn, a company constituted in 1875, which, with financial assistance from the principal towns on its route, obtained the concession for a line from Zofingen *via* Suhr (with a branch thence to Aarau), Lenzburg and Baden to Winterthur, and onward to Singen and Constance. The venture was unsuccessful, as was to be expected for a line avoiding entirely the more important centres, and after the Winterthur—Singen and Constance sections had been opened in 1875 and the remainder of the route in 1877, the company went into compulsory liquidation in February, 1878, and in 1880 its lines were taken over by the Nordostbahn. The latter transferred the Suhr—Zofingen section and half-ownership of the Aarau-Suhr line to the Centralbahn in the following year. The lines of the Nationalbahn paralleling those of the Nordostbahn were abandoned in 1880 between Winterthur and Effretikon, and in 1882 between Wettingen and Otelfingen. In 1881, the Nordostbahn opened a direct line from Oerlikon to Seebach, over which regular local services have been run since that time, but the original curve from Seebach to the Kloten line was not closed until 1907.

### Northern Ireland Transport

At the opening of the new session of the Northern Ireland Parliament, Viscount Craigavon, the Prime Minister, admitted that a crisis had arisen in regard to rail and road transport and that the scheme of dual control embodied in the Road & Rail Transport Act had broken down. The Northern Ireland Government's immediate plans for dealing with the problem were announced. They include the introduction of an emergency Bill to prevent evasions of the existing Act and to secure improvements in regard to hours and conditions of labour of workers in road transport competing with the board. A committee of both Houses—the House of Commons and the Senate—representing all parties, is to be set up to consider the reports of the committee presided over by the Recorder of Belfast, and the subsequent technical committee of which Sir William M'Lintock was chairman, which enquired into the operation of the present Act and recommended a merger of rail and road transport in Northern Ireland between the L.M.S.R. (Northern Counties Committee), the Belfast and County Down Railway and the Road Transport Board. This new parliamentary non-party committee will present proposals which the Prime Minister undertook should be embodied in whole or in part in a new Bill.

\* \* \* \*

### Germany's First State Railway

On December 1, 1838, the first section of railway in Germany owned and worked by a State was opened between Brunswick and Wolfenbüttel, as part of a line which eventually reached Harzburg. It owed its origin largely to the efforts of a civil servant of the then State of Brunswick, Philipp August von Amsberg (1789-1871), who strongly advocated that the State should build and operate the line, with the object of improving the commercial position, then considerably affected by the customs policies of neighbouring States. Two locomotives were obtained from England and one from America, and two English drivers, John Blenkinsop and James Black; the former remained in the service of the line until his death in 1884, as another Englishman, Wilson, did on the Nuremberg-Fürth Railway. The Harzburg end of the line was isolated from the rest until 1841 and worked by horses. In 1870 Brunswick sold the railway to a private company, the shares in which passed later into the possession of the Berlin-Potsdam and Bergisch-Märkisch companies. These concerns were absorbed by Prussia in 1880 and 1882, with the result that the Brunswick lines became part of the important Prussian State Railway system.

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### The Channel Crossing

The sense of insecurity which has become acute in the last few months has had the effect of considerably reducing travel between England and the Continent. There is one service, however, which is still regularly fully booked, and that is the Southern Railway night service by the train ferry between London and Paris. In the recent criticisms which have been made on the subject of the Channel crossing, the comfort and convenience of the train ferry service appear to have been overlooked, although that service is one of the most notable improvements of recent years. As we said in our editorial of December 2, the improvements that have been made on the marine side have not been accompanied in all cases by equal improvements ashore, and this, no doubt, has been attributable in no small degree to the dual requirements of the railway and Customs authorities. The new works at Folkestone Harbour, described on page 737 of THE RAILWAY GAZETTE of October 28 last, indicate, how-

ever, that the difficulties at that port have been overcome and that the arrangements at Folkestone will shortly match the comfort of the trains and the boats. We are glad to be able to publish on page 1062 a letter from the Traffic Manager of the Southern Railway announcing the approaching modernisation of the Customs hall at Dover. Thus the Southern Railway has not awaited the recent criticism before undertaking works designed to remove its cause.

\* \* \* \*

### Hammock Sleepers

Winter sports enthusiasts develop a certain protective resilience that doubtless makes a night journey in a third class compartment less trying for them than it would be for a bowls player or a darts champion. Even so, there is evidence that they appreciate a new facility of the French National Railways, in the shape of the provision of hammocks in compartments of third class corridor coaches on trains bound for such winter sports centres as the French Alps, the Pyrenees, and the Auvergne. An illustration reproduced on page 1044 shows the general arrangement. Three hammocks are provided on each side of the compartment, and one is slung in the centre between the top luggage racks, access being provided by a collapsible ladder. Although the accommodation is necessarily more restricted than that provided by other forms of sleeping accommodation on the French railways, it has proved very popular with travellers to the winter sports, among whom the proportion of young devotees with correspondingly slender means is rapidly increasing in France. The charge for a hammock is only fr. 15 above the ordinary third class fare.

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### Diesel Progress in Argentina

Capital expenditure by the Argentine railways during 1938 has had to be reduced to a minimum, and it has mostly been a case of marking time to weather the storm. Where there have been innovations, these were mainly in connection with diesel traction, with the object of obtaining greater efficiency in operation, combined with lower working costs. In the *Diesel Railway Traction Supplement* to THE RAILWAY GAZETTE of September 30, this subject was dealt with at length, and repetition at such a short interval is therefore unnecessary. It is sufficient to stress the statement contained therein that well over 250 oil-engined locomotives and railcars are at work in, or about to be shipped to, Argentina, and further programmes of great magnitude are envisaged. The State Railway officials have shown much enterprise in this direction, and on their lines there are at present in actual operation 43 diesel railcars or railcar trains, and 40 more of these units are due to arrive shortly. Some of the services on the Cordoba Central Railway, now operated by the State, have been converted to diesel traction.

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### All-welded Railway Underbridge

A notable event in this country is the construction of the first all-welded railway underbridge recently completed to carry the Hammermith & City section of the London Passenger Transport Board's railways over Ladbroke Grove. Although small all-welded bridges have been built in the North Eastern Area of the L.N.E.R., this bridge is the first in the British Isles of so considerable a span as 60 ft. Abroad, particularly in Germany, welding has been used for railway underbridges and, so far as we know, with complete success. We have little doubt that the enterprise of Mr. V. A. M. Robertson, Chief

Engineer of the London Passenger Transport Board, will be rewarded equally with success, for not only is the design of the bridge thoroughly sound, but the care with which the workmanship has been carried out by the contractor under his supervision is notable, as is immediately obvious by an inspection of the work. We understand that four more all-welded underbridges are already in hand for carrying the board's railways in various parts of London, and indeed it seems probable that the success of the first welded bridge will lead to the widespread adoption of this method of construction before long, although we should not be surprised to see, in a good many cases at least, riveting preferred for work that has to be carried out on the site.

\* \* \* \*

### Water Circulation in Locomotive Boilers

Various means have been suggested for improving the water circulation in locomotive boilers, and some have been tested in service. One of the earliest and best known devices was the arch tube, and although this application was primarily made for supporting the brick arch, these tubes do certainly promote improved circulation of the water from the throat plate to the upper portion of the firebox at the back. In arch tube locomotives it is found that the water surges higher than the normal water level, due to the rapid movement of the water through the arch tubes. Various other methods have been tried, some of which are still in use; one is the semi-water-tube firebox having water troughs in the crown plate connected to the side water spaces by means of circulating tubes; another type is the thermic syphon, a great many of which are in service, more especially on American railways. Still another is the design of circulators consisting of several vertical water legs dropped from the crown plate and having transverse connections to each side water space. In reporting on this subject at the twenty-fifth annual meeting of the Master Boiler Makers Association in Chicago, Mr. W. R. Hedeman stated that on the Baltimore & Ohio Railroad there are 12 locomotives with water-tube firebox boilers, the first built in 1927 and the last, a four-cylinder type, in 1937, and the total mileage to date of these locomotives is nearly 4,000,000 miles.

\* \* \* \*

### Wnajiblizszy

This glorious word, when we saw it, was helping to beautify the lack-lustre environment of an underground station, and we gathered from the context that it was not one of Mr. James Joyce's excursions into neo-English, but formed part of an "Invitation to the Dance" in Polish. We confess that our attempts at pronunciation have resulted in ignominious defeat, and if the newspaper-vendor who ingeniously rendered *Przemysl* as *Primrose* 'Ill is still alive and reads our S.O.S., perhaps he will step manfully into the breach. The late Lewis Carroll invented a word to describe some appalling sound consisting, he said, of "a bellow and a whistle with a kind of sneeze in the middle"; we thank the great man for his tip, but are somewhat chary of trying this combination in public. What concerns us more is the dreadful effect this florid emanation from Warsaw will have on the functionaries whose grim versions of station names already make us shudder; on the analogy of pitch and the defilement therefrom, we fear that it will goad these rhetoricians into even worse vocal villainies. With a view to parrying their assault, we are going to practice hard, and even if our tongue fails us we trust we shall be able to look Wnajiblizszy at them, when their ultra-violent distortions of South Kensington and Hyde Park Corner shatter our ear-drums.



## Railway Claim for Equal Treatment

AT the conclusion of the interview between the Minister of Transport and the chairmen and general managers of the four main-line railway companies on December 7, the Minister announced that he had decided to refer to the Transport Advisory Council, for urgent consideration and report, the railway claim for relief from the onerous statutory requirements in connection with the quotation and publication of rates for the conveyance of merchandise. The Minister carried out his intention on December 12 when he remitted to the council for consideration and recommendation the proposal of the companies that the existing statutory regulation of the charges for the conveyance of merchandise traffic by railway, together with the requirements attached thereto, including such matters as classification, publication, and undue preference, should be repealed. In doing so, he indicated that, as at present advised, he is inclined to the view that in existing circumstances there is, *prima facie*, a case for some material relaxation of the existing statutory regulations, provided that due regard is had to the ultimate objective of the co-ordination of all forms of transport. In this connection the Minister asked the council to consider particularly whether the whole of the regulations in question should be repealed, or whether, while retaining the broad outline of the existing position, certain provisions should be modified or repealed and, in either case, what, if any, safeguards would be desirable for the protection of other interests. It is understood that the council held its first meeting yesterday and that it hopes to complete its recommendations at an early date. The letter from the Permanent Secretary of the Ministry of Transport to the Transport Advisory Council, requesting the Council to review the railways' proposals, is set out in full on page 1060. On the same page is reproduced a statement of some of the principal features in the existing statutory regulations for the conveyance of freight traffic which would appear to be affected by the railway companies' proposals. These mainly have reference to the jurisdiction exercised by the Railway Rates Tribunal over charges to be made by the railway companies. Particular notice is also made of the restrictions on undue preference.

It may be recalled that the council was constituted under section 46 of the Road & Rail Traffic Act, 1933, for the purpose of giving advice and assistance to the Minister of Transport in connection with the discharge of his functions in relation to the means of and facilities for, transport and their co-ordination, improvement, and development. It is a most representative body, consisting of no fewer than 29 members under the chairmanship of Sir Arthur Griffith-Boscawen. The railway companies are represented by Lord Stamp, Sir James Milne, and Sir Ralph Wedgwood, and other members include influential representatives of the users of mechanically-propelled vehicles, the users of horses and horse vehicles, canals, coastwise shipping, docks and harbours, local authorities, labour interests, pedal cyclists, and pedestrians. The council has presented a number of valuable reports to the Minister dealing with road safety measures and records to be kept in connection with the operation of road vehicles, and its latest report, published in October, 1937, dealt with the question of service and rates. It should be noted, in passing, that the Minister is not obliged to accept every recommendation of the council and, in fact, he has not accepted its views on every occasion.

It is very gratifying to find that the Minister has so far recognised the justice of the railway claims as to indicate that there is a case for a material relaxation of the existing statutory regulations, while his request that the council should keep in mind the ultimate objective

of the co-ordination of all forms of transport is in keeping with previous work. The report on service and rates specially stressed the point that the investigations were intended to be in the nature of preliminary ground work to enable the council ultimately to judge the extent to which it might be possible to formulate practical principles upon which co-ordination might be achieved and developed between all forms of transport carrying goods. In compiling that report, the council made a special study of the problem of railway charging, and the information then obtained should facilitate reaching conclusions on this part of the remit. On the broader and more difficult issue of the ultimate co-ordination of all forms of transport, the railway companies claim that of necessity a preliminary step is placing the various competing forms of the transport industry on equal terms. In support of this view they point out that when they received their road powers in 1928 the fear was freely expressed that they would use them to embark on cut-throat competition with the existing bus companies. This fear did not materialise as the railway companies and the bus entered into a friendly partnership under which a striking degree of co-ordination has been effected. They consider, therefore, that their proposals, by conferring equality on all the competitors in the transport industry, will contribute substantially towards the achievement of co-ordination.

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## Railway Floors

SUCH meticulous care as is given to the track that carries the trains is not generally devoted by the railways to the tracks over which unflanged wheels run. True, the subject is one of which the importance is being increasingly realised, but anyone who frequents the premises of railway companies finds little cause to be impressed by the condition of the average railway floor whether it be a station platform, a quayside, or the floor of a railway workshop or warehouse. Some of the vehicles used for trucking are also in an obviously woebegone condition. Who has not suffered from the luggage barrow pushed from one end of a platform to the other with the wheels wobbling violently from side to side, causing unnecessary wear and tear to themselves, to the floor, to the human motive power, and to the beholders? There is no escaping the fact that bad floors and ill-maintained trucks are a form of extravagance. Their faults form a vicious circle by increasing maintenance costs and reducing the life of the vehicles and floors. That the tractive effort required under such conditions, too, is high, can be appreciated by making the elementary test of placing a match in front of an ordinary platform barrow and observing how much greater is the energy required to set it in motion than if the floor is unobstructed. What must the loss of energy be, therefore, when trucking has to be done over uneven surfaces covered with cracks and potholes? Good floors mean that trucks can be loaded to maximum capacity, or that trucks of lighter and therefore cheaper construction may be used. The reduced damage to merchandise by the reduction in jolting and vibration is another important point, particularly for railway companies who receive considerable claims for goods damaged whilst in their care. Finally, the psychological effect of good and well-maintained equipment should not be overlooked. A much greater sense of pride is engendered in men working with good than with dilapidated equipment, and the physical effect in leaving the men less tired at the end of the day is not negligible. Trucking and handling may be said to be the beginning and end of the business of railways, and deserve no less attention in every detail than other parts of railway working.



## Higher Railway Speeds

AT the meeting of the Institute of Transport on Monday evening last, the consensus of opinion, both as expressed in the paper by Mr. S. L. Fisher, Assistant Chief Operating Manager of the L.M.S.R. and by various participants in the subsequent discussion, was in favour of the general speeding-up of train services rather than undue concentration on ultra-high-speed trains. The function of the latter, as one speaker pointed out, is to put within the reach of the traveller special facilities that are outside the range of the ordinary train services. Emphasis was laid in this connection on such trains as the L.N.E.R. Silver Jubilee and the high-speed diesel services of Germany, which permit a business man to travel distances up to 300 or 400 miles from provincial cities to the capital, have ample time there for business, and then get him home by or before midnight the same day, so avoiding a night away. Such high-speed facilities as these are worth developing, for they tend to create personal contact, the substitute for which, apart from these trains, would probably be the post or the telephone.

In regard to general accelerations, the point was made that the solution of the problem is more likely to be found at the bottom of the speed scale than at the top. That is to say, the slow-moving freight train is the worst obstacle to progress; the United States and various countries in Europe, with their universal application of continuous brakes, have made it possible to develop a freight train running speed of 40 to 45 m.p.h., and indirectly have thereby facilitated the speeding-up of passenger services, but in Great Britain the incubus of hand-brakes and grease axleboxes, with which practically the whole of the privately-owned wagon stock is still fitted and much of the railway stock also, prevents any such development. In the circumstances, the aim should be to run lighter and more easily handled freight trains, and though more trains would thus be needed, their higher speeds would ultimately mean reduced line occupation. The value of electricity in raising the speeds of trains uphill, and so making possible train running at even speeds throughout, was stressed by one speaker as a valuable assistance in general speeding up. One point not raised in either the paper or the discussion was that of flying and burrowing functions in any acceleration scheme; it is in Germany that this principle has seen the utmost development; the opposite extreme is found in the United States, where probably the majority of crossings of one track over another are still on the level, rather than by overbridge or underbridge, although traffic density, on the other hand, is in general much less than in Europe.

Attention was drawn by two speakers in the discussion to a point to which the paper made only passing references, and that is the necessity for punctual operation. The timetable was acclaimed by one speaker, and not without justice, as being in the nature of a contract between the railway company and the passenger. Reference was made to American and Continental practice in officially encouraging drivers, and, indeed, expecting them to make up, within the capacity of their locomotives, arrears of time, even though the time had been lost by circumstances not under their control. The value of an incentive to time recovery, as in France, was stressed, provided that there are adequate safeguards against excessive speeds. To this the reply of the author was that some official encouragement to drivers to make up lost time was given in the L.M.S.R. official monthly publication *On Time*, but the hands of operating departments were somewhat tied in this matter until all locomotives working express trains were fitted with speed indicators.

As the fitting of such indicators is now rapidly in progress on the L.M.S. and G.W. Railways, it is to be hoped that on the completion of the work we may see the initiation in this country of a definite time recovery policy.

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## Nigerian Government Railway

THE Nigerian Railway is 1,903 miles long and is a heavily-graded line rising from the sea coast to a height of 4,500 ft. and falling again towards the Sahara. Nigeria has a population of 20,000,000, and the principal exports are ground nuts, cotton, tin, coal, cocoa, and palm oil. We have received from Mr. J. H. McEwen, the General Manager, a copy of his annual report for 1937-8. In this is a covering letter from Mr. G. V. O. Bulkeley, the Director of Transport. The report records an increase in traffic and receipts to record figures. The previous highest figures of revenue were in 1929-30, and an interesting table in the report shows that in comparison with 1929-30 the working expenditure was less and the other operating results better in 1937-38. The following table shows the principal statistics with regard to the railway for the year under notice in comparison with the previous year:—

	1936-7	1937-8
Gross receipts .. ..	£2,693,401	£2,965,382
Total expenditure .. ..	£1,175,368	£1,541,858
Interest on capital .. ..	£783,396	£764,691
Renewals account contribu- tion .. .. (including arrears)	£662,025	£427,547
Reserve fund contribution ..	£72,612	£231,286
Passengers carried .. ..	8,425,716	7,356,766
Tons hauled .. ..	1,162,249	1,200,920
Average length of haul ..	378 miles	383 miles

The Nigerian Railway depends to a considerable extent for its prosperity on the ground nut crop, and although the traffic reached record heights as already mentioned, this result was mainly due to the carry-over of the 1936-37 ground nut crop because in fact the ground nut crop in 1937-38 fell far below expectations. It will be noticed that working expenditure increased, this being due to increased prices and also to a revision and increase in wages. Passenger traffic, by far the greater proportion of which is native, shows that whilst the number of passengers carried decreased, the revenue slightly increased. This is described as being due to a reduction in the short-distance train service at the coast to provide more line capacity for freight traffic accompanied by an increase in the long-distance traffic. Road transport competition continues to be severe and the results of various steps taken to combat it are described in the report. Feeder road services continued to be operated with an operating ratio of 83 per cent.

It will be noticed that considerable contributions were made to the renewals and reserve funds. Prior to the year 1936-37 no contributions to these funds had been made for several years. The sudden increase in traffic threw a special burden on the railway as there were considerable arrears of maintenance to make up. Miles per day per engine in service fell from 104 to 99. Engine failures were at the rate of 25,705 miles per failure, which is as the General Manager points out a disappointing result, and special efforts are being made to improve matters in this respect. A statement is given in the report of the general financial results since 1916, the tendency of which is to show that the working expenses per train-mile and per ton-mile show a decreasing trend which has been accompanied, as a result of reductions in freight rates and passenger fares, by a reduction in the gross receipts per train-mile. In brief, it may be said that the position of the Nigerian Railway is a happy one, with a low operating ratio and a good return on capital.

## LETTERS TO THE EDITOR

(The Editor is not responsible for the opinions of correspondents)

### The Channel Crossing

Southern Railway,  
Traffic Manager's Office,  
Waterloo Station, S.E.1  
December 8

TO THE EDITOR OF THE RAILWAY GAZETTE

SIR,—In the editorial comments which you published under the heading "The Channel Crossing" in your issue dated December 2, there appear certain criticisms of the conditions which await a cross-Channel passenger arriving at Folkestone or Dover. May I, therefore, in order that the subject may not lose its true perspective, ask you to bring to the notice of your readers the fact that the Southern Railway Company has from time to time, as conditions permitted, taken steps to provide improved facilities for the convenience and comfort of its passengers by rail and steamer passing through the "Gateway to the Continent," and that it has not been unmindful of the need for doing all that is reasonably possible in that direction.

To banish entirely the disabilities inseparable from the location of a railway station at a spot where it is exposed to climatic conditions of great severity is a problem which is almost incapable of an entirely satisfactory solution, even by the expenditure of vast sums of money. As evidence, however, of the fact that the Southern Railway has not been inactive at Folkestone or Dover in its efforts to improve the conditions, it will be recollected that four years ago the company carried out various improvements at Folkestone Harbour station, while on page 737 of your issue of October 28 last, you described, with a plan, the extensive improvements and modernisation arrangements which the directors had authorised at a cost of between £40,000 and £50,000. At Dover, modernisation of the Customs hall is now being carried out at a cost of approximately £30,000.

It may be that considerations of space precluded the mention of the train ferry service operating between London and Paris, but I would point out that travellers by this service avoid any exposure whatever to weather conditions at the ports, or during the Channel crossing. The popularity of this service with the public is proved by the number of passengers who use it and the appreciation frequently expressed by them.

Yours faithfully,

E. J. MISSENDEN,  
Traffic Manager

### Cross-Channel Services

110, Fenchurch Street, E.C.3  
December 5

TO THE EDITOR OF THE RAILWAY GAZETTE

SIR,—It is gratifying in the extreme to the author of a technical paper when he feels that he has stirred up a good deal of discussion by virtue of his remarks. I welcome, therefore, the letter from Mr. Gibson of the L.N.E.R. published in your issue of December 2. Fortunately for reasons of space, he confines his remarks to two of the points that I made. I will deal with the second one first.

Mr. Gibson, together with certain other commentators, has rather mistaken the thought behind my "penchant," as he calls it, for open deck spaces. As regards day vessels I still maintain that weather conditions throughout a large part of the year are such that it is only with extreme discomfort that the passengers can be out in the open. As regards completely enclosed ships, these, if Mr. Gibson reads my paper carefully, were put forward as a likely development of the future rather than something for the present. The design pre-supposed development of the short service cross-channel ship into something along the lines of a large speedboat. This is not practical politics at the moment.

The day service design as developed in ships now building permits of ample walking space on the boat deck which no doubt is appreciated, provided proper shelters are available.

In this respect it is interesting to note that the new Flushing—Parkeston Quay ships have reduced their open top deck space to an area which will permit those passengers who wish to promenade when they can, but has provided ample shelter for them. I would commend Mr. Gibson to a study of the Zeeland Steamship Company's designs, for they show what I am sure he will agree is rational thought on this problem. The company realises frankly that the North Sea weather is more often inclement than fair; it admits also that there are always people who will have fresh air, and gives them considerable top deck space in which to enjoy it.

A somewhat similar thought I would commend for attention, is that developed by Fred Olsen on the new *Black Prince*, but note in each case that the deck space falls to the use of the fresh air passenger conveniently from the point of view of the designer, because there is no other useful purpose to which it can be put.

With regard to night services, I am quite at one with Mr. Gibson when he points out that there are always passengers who will promenade, but here again the distinction I would draw is between the design which permits passengers to promenade round cabin spaces and the design which again uses the topmost, i.e., the boat deck only.

Let us recall that in way of cabin spaces, the Irish Sea ships have only 830 sq. ft. for promenading space in way of sleeping cabins, whereas the corresponding railway-owned ship has practically double. Until all cross-channel services become fast speedboat designs, it will never be feasible to enclose the passenger entirely. When and if this happens, the world will be more air-minded than it is today, and claustrophobic feelings will be reduced by increasing familiarity with closed-in travel in flying boats or air liners.

The best way to deal with Mr. Gibson's remarks concerning his three ships, *Vienna*, *Prague*, and *Amsterdam*, I think, is in the form of a little questionnaire. In asking these questions it should be remembered that I am approaching the matter from a passenger point of view.

1.—Why is it that Mr. Gibson charges me £1 upwards for a single berth cabin on an upper deck in which I have to keep my blind down because of promenaders whom he would encourage, when I can get a better complete outside cabin on the Irish ships for 8s.?

2.—Why is it that the reading lamps are in the corner of the berth where they shed a crosswise light across one's book and not at the back and over one's head?

3.—Why is it that a bath on Mr. Gibson's ships costs me a shilling, and even when I am travelling only as far as Rotterdam, his stewards do their best to hustle me off the ship so quickly in the morning that I do not have time to spend my shilling? If I go to Belfast, I get my bath for nothing.

4.—Unless I have a cabin on the top deck I have to walk down narrow staircases, and if the watertight doors happen to be closed my passage back to my cabin is even more difficult. Here again I would point out that the Irish Sea ships have the majority of their cabins, two decks of them, completely above the bulkhead deck.

5.—I admit that the *Vienna* and her sister ships are up-to-date in having side doors for embarkation, but would Mr. Gibson tell me how many times in the course of a year these doors are used, and how often one embarks or disembarks at either end of the voyage from the deck above? This presumably is owing to tidal conditions. Were the deck above closed in by the cabins being carried out to the sides, another side door could here be arranged.

6.—I agree with Mr. Gibson's remarks concerning the commodious entrance halls, but why is it necessary to have one entrance hall with the principal stairways of the ship and another some distance aft containing the purser's office?

7.—I will grant a certain amount of exaggeration about the statement of blowing off the dust from plans of previous ships referring to the *Vienna* type, but it must be admitted

that her upper deck arrangements show a special likeness to those of the previous ships on the route, and certainly a reasonable similarity to those of the Antwerp ships, which by the way until recently were not even fitted with running hot and cold water. When the Irish Sea ships were planned, they were started completely from scratch and bear no resemblance whatever to their predecessors.

Finally I would say that whilst I have my own preferences for diesel drive in the matter of propulsion, I realise that there are many occasions in which this may be for various reasons quite impossible, but surely if steam is employed, then the most up-to-date watertube boilers should be used, if only because they cut down the space required for uptakes, and therefore permit of a more generous distribution of cabins on the upper decks.

Yours faithfully,

A. C. HARDY

### Stores Balances

4, Cowley Street,  
Westminster, S.W.1

December 13

TO THE EDITOR OF THE RAILWAY GAZETTE

SIR,—In your issue of November 25 there appeared a letter over the name "An Indian Railway Engineer," comparing the stores balances in hand on the largest Argentine railways with the stores balances of all the Indian railways. Such international statistical comparisons between railways in the Western and Eastern hemispheres are a good example of the ill-use to which railway and financial statistics can be put and are liable to be used in that sense by university lecturers on transport statistics.

Since the figures as set out by your correspondent may be

quoted in Buenos Aires as a criticism of these Argentine railways, I crave your space to draw your attention to some of the more obvious differences existing between the conditions appertaining in Argentina and India.

Assuming that the figures themselves are correct, it is worth pointing out that Argentina has as yet no heavy industries, fuel in the form of coal has to be imported, and that country is not so far self-supporting in the matter of oil. Practically all rolling stock, stores and materials have to be imported and a delay be allowed for of four to six months between ordering and arrival in the country; also materials required for extensions, which are, however, now unlikely to eventuate for the time being, have swelled the figures in the case of at least one Argentine line.

Analysis of the value of orders placed by the Indian Stores Department for State Railways lies before me, covering the fiscal year 1938, and in nearly 50 per cent. the country of manufacture is shown as India.

There is no need to stress other dissimilarities arising from variations in labour costs, ocean freights, insurance, &c., but in conclusion one may point out that even within one country there are often wide differences between individual railways in the supplies in stock on any one date. For instance, at the end of 1937 in the United States, stores (excluding rails, sleepers, scrap and fuel) in stock averaged between 4.1 and 5.5 months' supply in the different regions, but for individual railways serving the same region the variations were between 8 months and 2 months.

If conditions vary so widely within a country, the differences between Argentina and India are not surprising.

Yours faithfully,

C. E. R. SHERRINGTON,

Secretary,  
Railway Research Service

## PUBLICATIONS RECEIVED

**"Clear the Lines."**—An explanation in clear terms for the man in the street of the meaning of the main-line railway companies' "square deal" campaign, is contained in a forcefully-written booklet, entitled "Clear the Lines," which has just been issued by the Railway Companies' Association. The major point emphasised therein is that the railways of this country are and always have been the most efficient in the world, and with inexhaustible reserves of fuel in British coal mines, they are a vital agency in national defence. At the end of the war, the British railways were carrying half as much again as the peace time volume in 1913, and a similar demand in a national emergency now would increase the present traffics by at least 100 per cent. Copies of the booklet can be obtained free of charge at any railway station or office of the main-line railways, or post free from the Secretary, Railway Companies' Association, Fielden House, Great College Street, Westminster, London, S.W.1.

**"Australia."**—Mr. Harold W. Clapp, Chairman, Victorian Railways Commissioners, has sent us a copy of a handsomely-produced brochure, entitled "Australia," which has been issued by the Australian National Travel Association. Self-styled a "picture-book," this attractive publication is not intended to illustrate an ordered procession of Australia's show places; neither is it a portrayal of its development. It is an attempt, by the

selection and grouping of scenes, to give an inner reality to the subtle charm and character of the country and to the life of the people who live in it. The scenes it shows are those that every Australian knows and would like his friends and relatives in other parts of the world to know. Besides a wealth of half-tone illustrations, printed both in sepia and black, there are a number of reproductions in full colours of paintings and water-colours in the National Art Gallery of New South Wales.

**"Britain's Railways."** By Horace Greenleaf and Howard Hayden. London: Frederick Muller Limited, 29, Great James Street, W.C.1. 8½ in. × 5½ in. × 1¼ in. 232 pp. 53 plates, map, and four diagrams. Price 6s. net.—To provide a straightforward and comprehensive account of the development, organisation, and operation of the railway system in this country is the stated aim of the authors of "Britain's Railways," and the result is a book which, with the aid of its numerous well-chosen photographs, will make a ready appeal to the more serious-minded type of railway enthusiast. Beginning with a rapid survey of the evolution of British railways from the primitive mineral tramroads of the eighteenth and nineteenth centuries and the first steam railways, through the great days of expansion and competition, up to the time of the post-war grouping, an outline is then given of the spheres of operation of the grouped companies.

It is perhaps doubtful whether the next chapter, describing the organisation of a headquarters' department, will be of great interest to the type of reader likely to form the "market" for this work, especially as the systems of management of the five principal railways differ considerably. It is the composition of the succeeding chapters, on train operation, auxiliary enterprises, rates and fares, signalling, freight traffic, and electrification, that call forth praise on account of the surprising amount of matter which has been condensed into a very readable and instructive form. An index is provided and also a map (rather a skimpy one) of the British railways system.

**Nickel-Iron Accumulators.**—The well-known Nife (nickel-cadmium alkaline) accumulator, a product of Batteries Limited, Hunt End Works, Redditch, has found numerous transport applications, a selection of which is represented in an illustrated catalogue from the maker. All G.W.R. main-line locomotives equipped for A.T.C. carry Nife accumulators, representing a total of 12,000 cells. A battery of this type, for starting purposes, was fitted to the first diesel-electric railway vehicle, placed in service in 1913, and in its life of over 20 years was estimated to have operated the starter 350,000 times. Similar equipment is in use on modern diesel-electric vehicles of the L.N.E.R. The chemical structure of the Nife cell is such that no internal action takes place until the circuit is closed or it is placed on charge, with the result that it has an indefinite capacity for standing by on open circuit without deterioration.



## THE SCRAP HEAP

### ON THE RAILS

By the Man in the Street

"The Man in the Street," one of the most astute and readable evening paper columnists, devoted his column in *The Star* on Friday last to the British railway "square deal" campaign. His remarks, which we reproduce by courtesy of *The Star*, show a sympathetic appreciation of railway travel which should find response from all readers of *THE RAILWAY GAZETTE*:—

"The railways are certainly determined that nobody shall miss their demand for 'a square deal.'"

"It must be a long time since an industry carried out such an intensive campaign. It needs to be spectacular."

"The removal of legal restrictions on railway freight rates is hardly a subject on which the ordinary man, and still less his wife, can be expected to feel deeply. He must have it forced on his attention."

"On the whole the railways seem to me to have had a poor Press. Still, by this time, most of us, I imagine, feel that they have got a legitimate grievance, though I shall be surprised if they get all they want. Parliament has a soft spot in its heart for the new road transport services."

"I have been amused by some of the methods the railways have used to put this campaign across. They are pressing into service a cartoon which

my colleague, Grimes, had in *The Star* last Saturday.

"Their vans rumble through the suburban streets with great posters on their sides—a strange irony if they are motor vans, and more fitting if they are horse-drawn, since horses and trains have not been rivals for a great many years now."

"That dingy garden on the Euston Road which seems to belong to the L.M.S. is almost blotted out with posters. Driving through the countryside the other day, I found it placarded up hill and down dale."

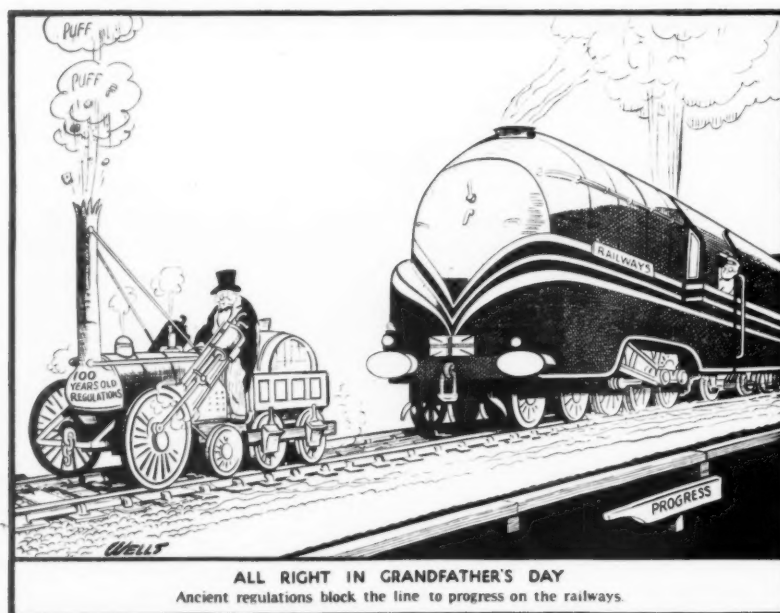
"It's really been done very well, as so much railway publicity is."

"How odd that trains, which were going to be the end of romance in transport, and the ruin of the countryside—remember how Wordsworth inveighed against them (though he bought railway shares on the quiet), and Ruskin, too?—are now one of the last strongholds of romance, and their viaducts and bridges honoured features of a landscape that is scarred and befouled with petrol pumps and exhaust fumes!"

"Yes, the railways have captured the glamour of travel, and made good use of it, too. But I wonder if the time has not come to get back to the elemental pleasures of going by train."

"I think if I were publicity officer for the railway systems, I should put

## CLEAR THE LINE!



REPRODUCED BY THE COURTESY OF THE "DAILY DISPATCH"

A cartoon from the "Daily Dispatch" adopted by the railways as a poster in their "square deal" campaign

ECONOMIES PROPOSED BY THE L.M.S. WILL INCLUDE THE STOKING OF ENGINES...



"ONE lump or two, Mr. Perkins?"

A fanciful footplate scene by "Phipps" in "The Daily Mail," inspired by the L.M.S.R. campaign for economy in locomotive fuel consumption

streamlined engines and showerbaths and cinemas and barbers' shops and all the modern amenities aside for the time being.

"And I would concentrate first of all, on the blessed peace of travelling by train, in a little world of your own, with another, fluid world, a quiet, pastoral England for the most part, slipping past the window. How different from the never-ceasing strain of a car drive, with the sensation of being a mere atom in a maelstrom, with traffic swirling and seething around you!"

"It can be quieter in a railway compartment than in a City office. I would find out how many men, for instance, who travel between London and Brighton every day, do their work, and some of their best work, in a carriage morning and evening, and then I would publish the results to a startled world."

"And I would point out how easy, how delightful it is to sleep on a train by day, rocked as in a cradle by the endless oscillation of the carriage. I would tell the story of my friend who frequently travels up to Manchester, and always sleeps as far as Rugby, when it is time for tea."

"That is one of the major pleasures of his life. I would make of 'Waking up for tea at Rugby' a slogan, a poster, a romance."

\* \* \*

According to the *Scientific American*, all the locomotives and carriages owned by the U.S.A. railroads, if coupled together, would make a train approximately 20,000 miles long.

## OVERSEAS RAILWAY AFFAIRS

(From our special correspondents)

### ARGENTINA

#### Combined Tickets between B.A.P. and B.A.W. Railways

The Director-General of Railways has authorised an agreement between the above companies, whereby return tickets issued at special rates between Buenos Aires and stations on the Castilla-Colonia Alvear-Jaime Pratz section of the B.A.P.R., and the Baez-Soitue-Carmenza section on the B.A.W.R., and *vice-versa*, will be available for return by either of the routes mentioned. The official resolution authorising this arrangement states that this new departure is intended to establish co-ordinated services between two competitive companies, and is a step towards solving some of the problems covered by the National transport co-ordination scheme.

#### Stone Ballasting on Cordoba Central Railway

Another Government Decree authorises the State Railways administration to ballast the above railway with stone over a distance of 100 km., with a view to the elimination of the inconvenience caused by dust, and thus stimulate passenger traffic.

#### Pullman Fares Exempt from Government Rebate

According to a judgment recently given by the Federal Court, Government employees are not entitled to the customary 50 per cent. rebate on railway fares, if they travel in Pullman cars. The Government had claimed from the B.A.G.S.R. the rebate in question in respect of the fares of 58 employees of the Ministry of Marine, who had travelled from Buenos Aires to Mar del Plata in Pullman cars. The company opposed the claim on the grounds that the rebate applied only to ordinary tickets, this contention being upheld by the Federal Judge, who accordingly pronounced in favour of the railway company.

#### Institution of Locomotive Engineers (South American Centre): Annual Dinner

The annual dinner of the above centre was held at the Argentine Yacht Club, Buenos Aires, on November 4. The Chairman of the centre, Mr. F. Campbell, presided. The special guests of the evening were Messrs. Stanley Irving, C.M.G., Commercial Counsellor to the British Embassy; J. A. Strong, Canadian Trade Commissioner; W. N. Storey, Commercial Secretary to the British Embassy; Engineer R. E. Ballester, representing the Centre of Argentine Engineers; Engineer E. M. Huergo, Chief Engineer of the State Railways; and Engineer-Commander E. Simms, R.N.

The toast of "The Guests" was pro-

posed by Major R. K. Hubbard, O.B.E., Assistant to the General Manager, Central Argentine Railway, who referred briefly to the present conditions on the railways. He said that locomotive engineers in Argentina and elsewhere had been instrumental during the last few years in effecting savings in fuel by the substitution of diesel railcars for steam passenger trains, and although the application of the diesel engine could hardly be extended economically to heavy passenger and goods working, it was being introduced for shunting, where it was hoped that a further field for saving would be found. Mr. Strong, who responded, pointed out that the steam railway was still by far the most important public transportation agency from the standpoint of traffic handled and capital invested. The problem was to place competition on a fair and equitable basis.

The toast of "The Institution of Locomotive Engineers" was proposed by Mr. Irving, who recalled that the Centre was founded some 18 years ago and that of the founder members, Messrs. M. F. Ryan, J. G. Mayne, R. E. Kimberley, and F. Gee, were still members. The toast was responded to by the Chairman; he paid a tribute to Mr. W. P. Deakin, a past Chairman, who had recently retired from the position of Chief Mechanical Engineer of the Central Argentine Railway.

### INDIA

#### Improved Painting Materials and Methods

For some years past the Indian railways and the Government Test House have been engaged in investigations with a view to improving painting materials and technique. About a year ago, however, it was considered advisable to obtain technical advice from outside India, as rapid development was taking place in other countries.

The Railway Board, therefore, obtained a loan of the services of Mr. F. Fancutt, F.I.C., Chief Paint Technologist of the L.M.S.R., who visited India last winter, and has since submitted his report. He visited the principal workshops of the State Railways, the Government Test House and the more important paint manufacturing firms in India, and inspected rolling stock under service conditions, as well as discussing the problem with the Indian Stores Department. After his return from India, Mr. Fancutt carried out experiments under controlled conditions of temperature and humidity corresponding to the worst conditions in India.

In making his recommendations, Mr. Fancutt has given full consideration to the fact that a very high percentage

of the painting materials purchased by Indian railways is manufactured in India. It is expected that his report will act as a spur to the paint industry in India to keep abreast of modern developments, and result in a standard code for painting practice on the railways ensuring a considerable improvement in materials and technique. In this way it is hoped to secure not only substantial economies, but also improved appearance, and greater resistance to corrosion and deterioration, making possible longer periods between repairs and improved rolling stock user.

### UNITED STATES

#### 57th Anniversary of the Pennsylvania Limited

On November 19 what is claimed to be the world's first "limited" train celebrated the 57th anniversary of its inauguration. Known in 1881 as the New York-Chicago Limited, it became the Pennsylvania Limited in 1891, and was the premier train of its time. It completed 41,674 single journeys, covered roughly 37,800,000 miles, and carried over 7,300,000 passengers in the 57 years it had been running between New York, Philadelphia, Pittsburgh, and Chicago. This train has constantly been a pioneer in introducing innovations in long-distance travel. From the first it was equipped with Pullman "hotel" cars having kitchens. In its second year it had separate dining cars, also sleeping cars, and in 1887 it was the first train in the United States to be lighted throughout with electricity; two years later it was equipped with an observation car. Other early features were a train secretary, daily newspapers, news bulletins, financial quotations, ladies' maid and barber's shop, and steel-frame connecting vestibules.

### ITALY

#### Opening of the Vittorio Veneto—Ponte-delle-Alpi Railway

The Vittorio Veneto—Ponte-delle-Alpi Railway construction has now been completed and the line opened for traffic, thus providing a new direct connection between Venice and Cortina d'Ampezzo and Venice and Dobbiacco (Toblach). It reduces the distance between Venice and the Cadore district *via* Vittorio Veneto by about 100 km. as compared with the old route *via* Feltre and Belluno. The cost of the new line is 125,000,000 lire.

There are 26 tunnels, of which that under the Fadalto Pass is 2,150 m. (about 1 mile 600 yd.) in length, and 6 major viaducts, the Piave river being crossed by one having nine spans each of 24 m. (approx. 79 ft.). The line is designed and equipped for speeds up to 70 km. (43½ miles) p.h. but during the trials 100 km.p.h. was reached.

In connection with this new line, it is proposed to construct another new

railway from Ponte delle Alpi and Villa Santina, the terminus of the local line owned by the Società Veneta. The State Railways administration also intends to take over this local line, so as to give direct connection between Ponte delle Alpi and Trieste via Sazione per la Garmia. Udine, Gorizia, and Monfalcone. A further extension is proposed to connect Ponte delle Alpi and the Brenner Pass line, to provide direct routes between Munich and Venice and Munich and Trieste. [See map on page 721 in our issue of October 28 last—Ed. R.G.]

## CHINA

### New Line to South-West Open

It is now reported not only that the first section of the Hanyang—Kweilin—Nanning—Indo China line is completed, but also that a regular service of trains is running on it, presumably from Hengyang—the junction with the Canton—Hankow line—to Kweilin, capital of Kwangsi.

### Effects of Air-bombing on Railways

Addressing the Hankow Rotary Club in September, Dr. Francis Pan, Director of General Affairs, Ministry of Communications, gave the following information about air bombing of the Chinese railways by the Japanese.

On the Canton-Hankow and Canton-Kowloon Railways 5,538 bombs had been dropped in 684 raids up to June last. Other details were:—

	C.-H.R.	C.-K.R.
Average interval between raids	18 hr.	46 hr.
Percentage of bombs causing no damage	68	81
No. of bombs required to kill one railway employee	171	425

On all railways 25,000 bombs had then been dropped or an average of 5 on each km. of line.

Soochow junction near Shanghai was bombed every day for two months, but the Shanghai-Nanking line, running through it, was never blocked for more than 24 hr. at a time.

Dr. Pan disclosed that the formation for the loop line connecting the Canton-Hankow and Canton-Kowloon lines had been unostentatiously completed before the outbreak of war, and it was only necessary to lay the track to provide through running from Kowloon (Hong Kong) to Hankow, thus completing the main channel of supplies to the Chinese armies.

New railways were, Dr. Pan said, being constructed in the face of great difficulties both as regards supplies and materials, and, in some cases, interruptions by air bombing. The new lines in the south-western Provinces were being equipped with any material that could be salvaged in retreat farther east. The very day the Nanking-Kiangsi Railway celebrated its completion, orders for its demolition were received.

Among the foreign nations that had railway investments in China, Great Britain, with a total capital of over £20,000,000 involved, had, he pointed

out, suffered most as a result of the Japanese invasion.

### The Resources of the Country

Despite the war—though in some cases because of it—and the occupation of so much of China by the Japanese, a considerable amount of new railway construction is at present in hand. The programme still being worked to consists of 11 new lines estimated to cost in aggregate \$700,000,000. As they are all either of paramount military importance or are required for the development of the south-western and western provinces still in Chinese hands, the Government has raised loans locally for financing the projects. The vast size and population of China makes this possible even though the more developed half of the country is under foreign control.

## SWITZERLAND

### Re-opening of Spur Line during Zurich Exhibition

In connection with the National Exhibition which is to be held in Zurich next year—referred to in THE RAILWAY GAZETTE of October 7, on page 604—arrangements to cope with the intense local and long-distance traffic expected, include the re-opening of a connecting spur between Zurich-Seebach station and the line towards Winterthur via Kloten. The use of this spur will enable goods traffic between Winterthur and the Olten and Basle routes to avoid Zurich entirely during the period of the National Exhibition, thus relieving congestion in Zurich station and also on the double-track Zurich—Oerlikon section, which has the heaviest traffic of any line of the Federal Railways after the Berne—Wilerfeld section.



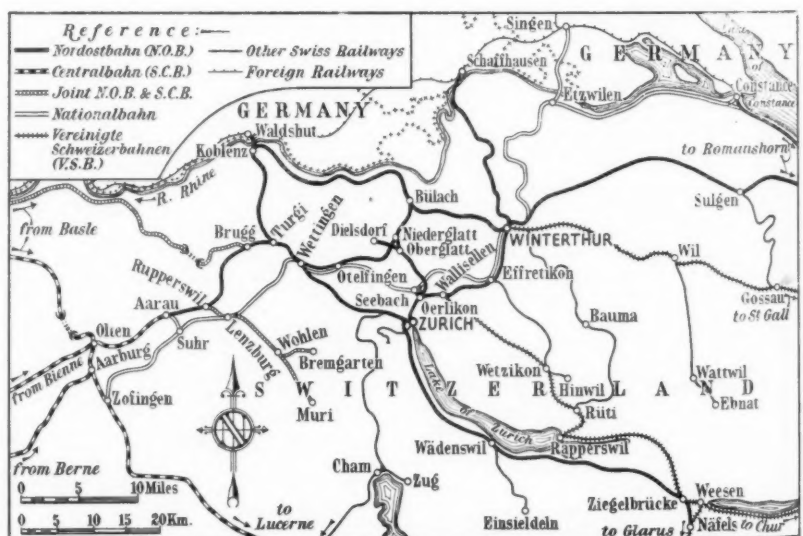
Map showing lines round Zurich

It has not yet been announced whether the line from Wettingen to Seebach and Kloten is to be electrified in connection with this project, but it is of interest to recall that the Seebach—Wettingen line was temporarily electrified in 1904 by the Oerlikon works to serve as an experimental line for pioneer work in connection with the introduction of heavy electric traction in Switzerland. (See also editorial note on page 1032.)

## IRAN

### German-built Goods Locomotives

Nine standard-gauge 2-8-2 and three 2-10-0 goods engines have recently left the locomotive workshops of Henschel & Sohn G.m.b.H. of Kassel, Germany,



Map showing the railways in north-eastern Switzerland on the completion of the Nationalbahn, in 1877. These are referred to in an editorial note on page 1032



for service on the Trans-Iranian Railway. They are being shipped, some from Hamburg and some from Bremen, to Bandar Shahpur, on the Persian Gulf, where extension work is still going on. These locomotives comprise the first consignment despatched from the Henschel works in compliance with an order received from the Imperial Iran State Railway administration for 32 goods locomotives, 16 to be of the 2-8-2 type and 16 specially heavy 2-10-0's.

## FRANCE

### Low Fares

In "Notre Métier" the railwaymen's magazine published by the S.N.C.F., passenger fares in the principal European countries are compared in tabular form. The table indicates that fares in France are the lowest of all. A comparison made for a third class return ticket for a single distance of 300 km. (186 miles) is as follows: France fr. 160, Belgium fr. 199 25 c., Italy fr. 222 70 c., Switzerland fr. 274 55 c., Germany fr. 410 20 c., England fr. 430 65 c.

## DENMARK

### Air-brake Equipment

To facilitate the introduction of the compressed-air brake, arrangements have been made for the State Railways to acquire a number of goods wagons belonging to the various private railway companies in order to save them the expense of fitting air brakes or pipes to their stock. All transfer goods traffic between private and the State railways will henceforth be carried in State Railway wagons, while the private companies will retain only such goods rolling stock as they may need for traffic on their own systems; in nearly all cases this is only a very small proportion of their total goods traffic, which, in any case, is never very great. The new Hildebrand-Knorr air-brakes are now beginning to make their appearance on goods wagons in addition to the all-steel passenger coaches recently supplied to the State Railways fitted with these brakes. But it will not be possible to begin systematic operation of air-braked goods trains for some time yet.

### Thorough A.R.P. Black-out on Railway

The first A.R.P. black-out in this country took place on November 7-10 last. It included Roskilde and environs and affected about 50,000 people. Valuable experience was gained, and further black-outs on a larger scale, culminating in one of Copenhagen, are envisaged.

On this occasion the railways affected were the Copenhagen—Korsør Copenhagen—Kalundborg, and Copenhagen—Køge—Gedser lines, and the actual black-out area included the important station at Roskilde itself and the lines out to the first station on

each of the four lines concerned. All trains passing this area after dark were darkened by fitting screens with narrow slits over headlamps and tail-lamps, by covering in all locomotive cabs, including the side windows, by extinguishing all lamps in corridors and half the lamps in each compartment and covering all remaining lamps with blue paper or cloth, and by drawing all blinds and curtains and requesting passengers not to draw them aside to look out while in the black-out area. At Roskilde all station lighting was extinguished except various blue lamps on the platforms, and the home and outer starting signals, besides a couple of essential shunting signals; all these signal lights were subdued and fitted with masks with narrow slits, which were narrowed still further after the first night's experience. All distant signals, which, show winking yellow, green or double green lights, were completely extinguished, but during periods of only partial black-out the point-indicator lanterns were very faintly lit.

The black-out was very complete, but caused only slight inconvenience, thanks to the good discipline and co-operation of all concerned. Delays to trains were of a minor nature. On the second evening, from 9 to 11.30 p.m., 27 trains were noted, and their average late arrival, passing, or departure was under 5 min.; the maximum was 15 min., and one train, an express goods from Copenhagen to Korsør, passed 3 min. early. Through trains were fitted with prepared headlamps and tail-lamps at the last stop before Roskilde, while stopping trains were so fitted two stations from Roskilde.

During the periods of complete black-out observing aeroplanes could not find the station or moving trains except when flying at heights of less than about 1,000 ft., but when the moon was out, the white exhaust from the locomotives of moving trains could be seen at greater heights. One fireman had, apparently, foreseen this, as he maintained his exhaust more black than white! Even the moon had been thought of, as it was totally eclipsed for part of the first night!

### Lyntog Driver's Suicide

On November 2, a dramatic suicide took place on the State Railways. The evening Lyntog from Copenhagen to Struer stopped on the Little Belt bridge, although the block signal was "off" for it, and the guard was horrified to observe the driver get down from the train, cross over the tracks and jump straight off the railings into the sea 100 ft. below. The guard was too far away to do anything, and the driver did not heed his shouts; the second driver was in the rear motor-coach at the time and saw nothing, neither did any of the passengers notice the drama. The second driver took the train on to Fredericia with only a couple of minutes' delay, as it was quite hopeless to attempt anything in

the nature of a rescue action owing to the powerful and erratic currents always running in the Little Belt.

## SWEDEN

### Proposed Absorption of Private Railways

Increasing confusion in the transportation system of this country was largely responsible for the appointment, in 1936, by the Department of Communications, of a committee to study the problem and prospects of merging the many small private railways with the State system. This committee has now published its report. Among the advantages which, the report claims, would accrue from such amalgamation, are the following: (1) lower freight rates, (2) saving of time in freight and passenger schedules, (3) economies resulting from large-scale purchases, and (4) a stronger front against the increasingly acute competition from inter-city motor lorries.

The total extent of all the railways in Sweden is 16,883 km., of which 7,901 km. are the State Railways, and the other 8,982 are company owned lines. The latter figure includes 5,304 km. of standard gauge and 3,678 km. of narrow gauge line. There are 28,700 employees on the State Railways, and 20,100 on the private lines.

The proposal is that 22 of the private lines, totalling 686 km., shall remain under their present ownership, but all the others are to be bought out by the State Railways. The theoretical purchase price is not stated in the report, and the executives of the State Railways decline to commit themselves as to the probable total cost because of the many varying factors involved. It is urged that the most feasible procedure would be the passage of a special Act, permitting the consolidation of the railways on the basis of some objective valuation scheme. The proposed programme would take five years to complete, the various lines being taken over in order of their importance to the system at large. The principal drawback advanced against the programme is that the amalgamations would involve the discharge of 2,000 employees.

### Accelerations from May Next

Considerable train service accelerations on the State Railways will come into force on May 15, 1939:—

Stockholm—Trondheim night services in each direction 35-37 min. faster.

Stockholm—Storlien day service accelerated by 24 min.

Stockholm—Oslo: Between June 20 and September 3 a new train will leave Stockholm at 12.40, arriving at Oslo at 23.10, and will include through carriages of all classes between the capitals and a dining car as far as Laxa.

Copenhagen—Elsinore—Hälsingborg—Gothenberg: the afternoon service will be accelerated by 40 min.

Better connections will also be made by the international services between Stockholm and Finland, Copenhagen, and Germany.



## ALL-WELDED UNDERBRIDGE IN WEST LONDON

*The first all-welded railway underbridge of appreciable size in Great Britain has recently been erected to carry the Hammersmith & City Railway over Ladbroke Grove*

*(See drawings opposite)*

THE old bridge which carried the Hammersmith & City Railway over Ladbroke Grove, Kensington, was built in 1863. It was of wrought iron and consisted of two main girders with built-up cross girders; the track was carried on longitudinal timbers on a timber deck. This bridge was due for renewal in accordance with programme work which is being carried out on the Hammersmith & City section of the London Passenger Transport Board's railways, and it was decided to investigate the possibilities of renewing the structure by means of an all-welded bridge. In view of the fact that very little welded work of this nature has been carried out in this country, it was decided to keep the design of this bridge to the simplest possible lines, at the same time having some regard to its finished appearance. The drawings reproduced show the general arrangement of the bridge and typical details.

Designs and drawings were prepared for both riveted and welded bridges of similar types, and it was found when tenders were invited that, although the cost of the welded steelwork was higher per ton, the total saving in



*Welded bridge at Ladbroke Grove*

the cost owing to the reduced weight was approximately 7 per cent. It is estimated that 20 per cent. of the total weight of steel in the bridge was saved in the welded design.

The main girders are constructed of plates of varying thicknesses and all joints are made by double-vee butt welds. These girders were built up entirely as units in



*View on the railway of the welded bridge built by the London Passenger Transport Board at Ladbroke Grove*



the contractor's yard and brought to the site by rail. They were then off-loaded to temporary trestles, and placed in position ready to receive the deck. The deck is composed of heavy section 10-in.  $\times$  8-in. joists at 1-ft. 8-in. centres; they were brought to the site by road and lifted into position by a 5-ton mobile crane. They were then welded to the main girders and the space between them filled with concrete. A layer of waterproofing was placed on the top of the joists and concrete, and above this brindle tiles were laid set in bitumen ready to carry the ballasted track. Parapet screens were welded at the site to the outside girders. Erection was carried out by rolling out the old bridge to one side of the line, and rolling in the new from the other; this work was done during an occupation of 12 hours from 1 a.m. to 1 p.m. on Sunday, August 28. Deflection tests were afterwards taken and it was found that the structure displayed considerable rigidity; the maximum deflection on the centre girder when two trains were crossing the bridge at the same time, one on each line, was not more than  $\frac{5}{16}$  in.

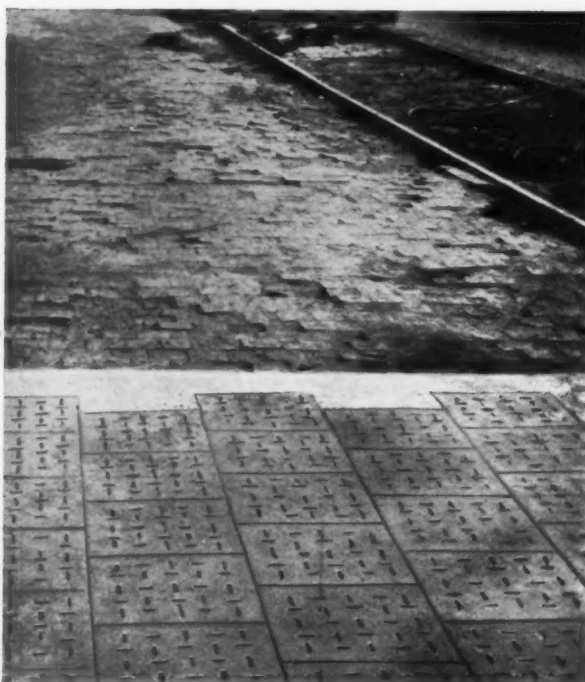
The advantages claimed in connection with this type of work as against riveted work are:—

- (a) Saving in weight and, consequently, in all costs where weight is a consideration.
- (b) Less likelihood of corrosion.
- (c) Full strength of joints can be more easily developed.
- (d) The site work is quicker and quieter than riveting.
- (e) Reduction in maintenance costs.
- (f) Less vibration than on riveted work.

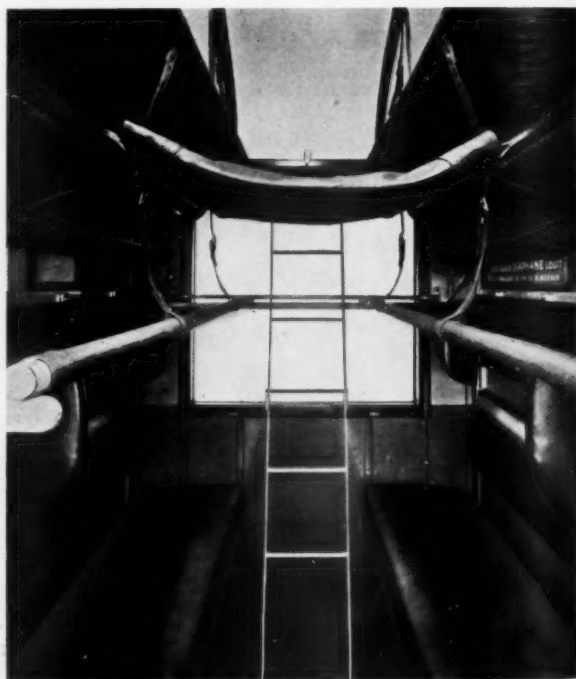
The bridge was designed in the steelwork section of the Chief Engineer's Department, and all the necessary inspections, site work, etc., were carried out by the board's staff. The contractor was Dorman, Long & Co. Ltd., Middlesbrough, and Quasi Arc "T" type electrodes were used throughout.

### The Pioneer of the Sixth Avenue Elevated Railway

The famous Sixth Avenue elevated railway in New York, which was abandoned on December 4, owed its origin to Dr. Rufus H. Gilbert, who died in New York in 1885. He was born at Guilford, Chenango County, New York, in 1832, where his father, W. D. Gilbert, was one of the judges of Steuben County. Dr. Gilbert was apprenticed to a druggist, but he had a mechanical turn of mind and soon tired of the apothecary's shop. He then obtained a position in an engineering establishment where he laid the foundation of that knowledge which later on in life enabled him to tackle the rapid transit problem of New York. He interested himself in the pneumatic tube system, but finally abandoned it as impracticable. He then brought out a patent for an elevated railway, and secured a concession for a road through Sixth Avenue and Second Avenue. The patent was for an arch thrown from one side of the street to the other, upon which local trains and through trains were to run on independent tracks. Great difficulty was experienced in financing the scheme but the required money was eventually obtained, and the structure in Sixth Avenue was begun. On May 1, 1878, the first car was successfully run from Trinity Church to Fifty-ninth Street in 16 minutes. At first Dr. Gilbert was Chief Engineer of the road, and the name of the undertaking was the Gilbert Elevated Railway Company, but soon after his appointment he was forced into a lengthy law suit with the company concerning an alleged infringement of his patent rights, and died a comparatively poor man in 1885. The name was changed to the Metropolitan Elevated Railway Company at the time the line was opened (June, 1878), and the property passed into the hands of the Manhattan Railway Company in February, 1879.



*An example of a rough and inefficient floor in a railway locomotive shop being replaced by a hard-wearing smooth floor. The subject of railway floors is discussed in an editorial article on page 1034*



*Third class compartment of corridor coach, French National Railways, provided with hammocks for night journeys, thus affording cheap sleeping accommodation for visitors to French winter sports centres (see page 1033)*

## ROAD TRANSPORT SECTION

*This section appears at four-weekly intervals*

### Common Carriers

THE launching of the "square deal" appeal by the main-line railway companies has given rise to many misconceptions on matters which have no direct relation to that appeal. Amongst them is the question of common carriers. The railway companies have expressly declared that they are not seeking in any way to limit their existing liability as carriers, so that any discussion on that point is immaterial. Almost inevitably, however, the question is being asked, "What is a common carrier?" leading up to the position in that respect of the modern road haulier. The common law rights and liabilities of a common carrier by road or water had been laid down long before the days of railways, and it was only incidentally that the statutory regulation contained in the Carriers Act, 1830, came into force shortly before railways were beginning to make themselves felt. Now, few modern road hauliers have called themselves common carriers, and some of them have even declared that certain provisions in the Road and Rail Traffic Act, 1933, prevent their being such. This, of course, cannot be the case. The question whether a road haulier is or is not a common carrier is one of fact in each case. As Mr. Justice Bailhache said in a case in 1918, "A man may be a common carrier without so styling himself." If the carrier does not define his profession its extent is a question of fact, and it has to be determined by reference to his means of carriage, his circumstances, and his conduct. So he will not be heard to say that he is not a common carrier of goods which he is shown to have constantly accepted without special terms, nor will he be compelled to accept dangerous goods, or goods of exceptional size, even though he professes to carry ordinary goods of the kind in question. It is a matter of great moment to a haulier whether he is a common carrier or not, for in the first event he is an insurer of the goods (failing contract to the contrary), and otherwise he is liable only for negligence.

### New Bus Station for Edinburgh

THE construction of a large central bus station on a site adjacent to St. Andrew Square, Edinburgh, was recently announced by Sir William J. Thomson, Chairman of the Scottish Motor Traction Co. Ltd. He said that negotiations were almost complete for the acquisition of property covering the proposed site, and that the cost of the whole scheme would probably be in the region of £150,000. The site of the proposed station is bounded by St. Andrew Square on the west, Clyde Street on the north, and Elder Street on the east, and is within 300 yd. of the General Post Office. Experience has proved that the vicinity of St. Andrew Square provides the most suitable terminus for bus services; and as a result of this enterprise the square itself will cease to be used as a bus station, and the difficult problem which has been

before the Edinburgh Town Council and the Scottish Motor Traction Company for several years should thus be solved satisfactorily. We understand that it has been possible to plan a very large building without greatly altering the appearance of any of the principal streets in the city.

### Danish Transport Co-ordination

IN December, 1936, the Danish Government set up a commission to work out a national transport policy and a scheme for its realisation. The findings were expected in July last but the publication of the report has been delayed. Herr N. P. Nielsen, the Chairman of the Commission, in an address to the Association of Private Railways, has, however, given an outline of the recommendations. The division of passenger traffic between road and rail is, with few exceptions, held to be fairly well arranged at present, but goods traffic is not subject to adequate regulation. Hours of work and agreed wages rules are often infringed and speed regulations ignored, leading to many road accidents. It is now proposed to set up a transport committee in every administrative district, including representatives from the local authorities, the Ministry of Transport, the railways, and the motor transport concerns. Licences to the last-named will be granted on the recommendation of the committees, and any concern violating any law or statutory regulation will be liable to have its concession revoked. Four classes of railway line are to be recognised, varying from those unlikely to be at any time in need of State assistance to those that are not considered worth while supporting to enable them to continue working. In deciding in which category a given line shall fall, the committee will consider the traffic capacity, the financial results of the last few



*Unusual view of the retractable undercarriage and coupling gear of a Scammell mechanical horse and trailer in the service of the Southern Railway*

years, the probable prospects of the railway and the state of its equipment, and the road transport conditions in the particular district. It is also proposed that where assistance is held to be justified this shall take the form of better loan facilities and the cancelling of certain charges now levied on the private lines. To receive a loan enabling them to bring their lines and equipment up to date, the companies must accept certain obligations and undertake to provide service during the term of the loan. The committees can recommend the transfer of bus and lorry lines to the railways, with suitable compensation to the road transport concerns.

### Safeguarding Level Crossings

ALTHOUGH the elimination of level crossings is being pushed forward as fast as funds and circumstances permit, it will be many years before the last of them disappears, especially in America, where their number is legion. Consequently, there is still an opening for any sound and reasonable form of crossing protection, to prevent the frequent accidents that now occur. Flashing and other lights, warning bells and similar devices controlled by track circuiting or otherwise, have been installed in considerable variety, and more recently electric radiations and light rays have been tried in the United States for operating or controlling such safety devices. One of the most ingenious of these is an American apparatus adapting the principles of inductive A.T.C. to this purpose. Coils, set flush with the roadway and operated by track circuits, emit electrical impulses activating a device on any road vehicles fitted with it. The approach of a train to the level crossing automatically energises the road vehicle equipment, which cuts off the ignition and applies the brakes; this device has been patented by two Pennsylvania inventors, and is now being demonstrated. Its weakness, however, seems to lie in the difficulty of making compulsory the equipment of all road vehicles with the mechanism, especially in the United States, where road transport regulation is controlled by individual States. Much also depends upon the cost of the installation, which would, presumably, have to be borne by the road user. The German State Railway is known to be experimenting with apparatus which actuates the A.T.C. equipment on a train if it is approaching a crossing where the gatekeeper has omitted to close the barriers against road vehicles.

### A Reichsautobahn in Czecho-Slovakia

THE announcement made in Prague on November 21 that an agreement had been signed between Czecho-Slovakia and Germany, allowing the latter to build a great motor highway across Czecho-Slovak territory from Breslau to Vienna, is of particular interest in two respects. First, Germany will bear the entire cost of construction, and the road will be the property of the Reichsautobahn organisation, which for the first time extends its operations outside Germany. Work is being begun immediately, and will be completed by 1940. Secondly, the arrangement amounts to the establishment *via* Brünn of a German corridor, 40 miles long and 64 yards wide, between Silesia and Austria, over which Czecho-Slovakia will have no control. Germany will bear the cost of building links over and under this road between the parts of Czecho-Slovakia on each side. At all entrances and exits from the *autobahn* Czech and German Customs offices will be established. Germany will provide police, Customs, passport, and other officials to supervise traffic on this road. Czecho-Slovak motorcars will be entitled to use the section of the road through Czecho-Slovakia without

payment and without passport visas. It is understood that Czecho-Slovak engineers and workers will be employed by the Reichsautobahn organisation to work on the road, but the employment of German firms and workers is not excluded under the terms of the agreement.

### Road Transport in Canada

THE number of motor vehicles registered in Canada has increased rapidly, according to the Report on Economic and Commercial Conditions in Canada, published by the Department of Overseas Trade (H.M. Stationery Office, 2s. 6d. net). While in 1926 there were 832,268 vehicles registered, in the year 1937 the figures reached a total of 1,350,942, of which 1,091,900 were passenger cars and 259,042 were commercial vehicles. The operation of commercial vehicles, says the report, has developed to a considerable extent, and there is severe competition within the motor lorry industry as well as with the railways. This situation is at present the subject for an investigation in Ontario, this province accounting alone for nearly half the registrations. The total highway mileage open for traffic in 1936 (the latest year for which details are available) was estimated to be 410,448 miles, of which total the length of surfaced roads was reported to be 99,350 miles. Gravel roads predominate, and over half the surfaced road mileage is in Ontario. The total expenditure on roads in 1936 was estimated to be about \$52½ millions, of which a sum of approximately \$8 millions was for new construction and the remainder for improvements and maintenance, snow clearing, and so forth.

### Successful Replacement of Light Railways

CONSIDERABLE success has been achieved by the road motor services introduced by the German State Railway on August 2, 1936, to replace the light railways in the district around Bad Kreuznach, on the Reichsbahn main line from Mainz to Saarbrücken. In our issue of December 18, 1936, at page 1026 we recorded the changeover and published details of the new arrangements, and the following particulars of the working results achieved are taken from an interesting article contributed by Reichsbahnoberrat Wendt to the *Zeitung des Vereins*. Passenger traffic increased from the beginning, at first with passengers from the more distant places on the route, but from the fourth month the short-distance journeys began to show a rise, especially in inclement weather, many persons going by bus instead of using bicycles. During the spring and summer the numbers were well maintained and showed much better results relatively to the winter days than had been usual with the old light-railway train service. For the first eleven months only the regular advertised services were run, but in July, 1937, a beginning was made with excursions in the afternoons into the Soonwald district with most satisfactory results; the average fare for these trips was only 2 to 3 RM. A slightly higher transport tax has to be paid on these excursion trips than on the regular service journeys.

A comparison between the last full year's working of the railway and the first of the buses shows total passenger receipts to be 100,616 RM. against 52,357 RM., a rise of 92 per cent., and passengers carried 304,105 against 143,153, an increase of 112 per cent. March, 1937, showed the greatest percentage increase (191) over the corresponding month in the preceding year. These good results were achieved despite the fact that the type of vehicle used was really a coach and not a bus, owing to difficulties with deliveries at the time, and afforded



little accommodation for standing passengers. Nevertheless, in the first year an operating coefficient of 96 was obtained, inclusive of all fixed and variable costs, such as interest, depreciation, pension charges, taxes, garage expenses, oil, fuel, tyres, accident insurance, and repairs. Mileage run per vehicle averaged the high figure of 40,000 km. (say, 25,000 miles).

The goods services also gave gratifying results, although there was a decline in the first month, as customers found some slight difficulty in adapting themselves to the change. After that, however, increases in tonnage and receipts were shown month by month over the corresponding railway period; the total tonnage for the year was 1,894 tonnes against 1,489, and receipts were 12,226 RM. against 9,744, being percentage rises of 27 and 25 per cent. A circular route, joining two passenger termini, was adopted, enabling places to be served with one daily call and the lorries to be used to best advantage, but any longer run resulting was not considered in fixing rates. Most of the traffic, however, is found in the district just round Kreuz-

nach; nevertheless, although the total circular run is about 60 km. (37½ miles), average monthly takings are satisfactory.

At one time traffic in complete truck loads on the light railways had been good, but in the final year it amounted only to 8,825 tonnes, with receipts of 11,340 RM., and consisted chiefly of heavy logs of timber, which required experienced handling. This traffic has been made over to certain local road hauliers, as also that in coal and other bulky articles. Against this change the Reichsbahn sought to regain the better class parcels and package traffic which had been leaving the light railway for the roads. This effort has proved successful and has brought new traffic to the Reichsbahn main line. In the first year there were 2,138 tonnes in full lorry loads from and to Kreuznach station, much less than in the light railway days but consisting of better paying consignments. In the first complete year of road motor working, the total receipts from passengers and goods rose about 55 per cent.

## Publications Received

**A History of Everyday Things in England : Volume I, 1066-1499.** By Marjorie and C. H. B. Quennell. London: B. T. Batsford Limited, 15, North Audley Street, Mayfair, W.1. 9 in. × 5½ in. × 1¼ in. 242 pp. Fully illustrated. Price 8s. 6d. net.—In our issue of February 11, 1938, we reviewed the latest edition of Vol. II (1500-1799) of this excellent four-part history, and it seems that the continued demand for these volumes has necessitated the production of a further impression of Volume I; the copy now before us is described as the third edition, seventh impression, revised and enlarged. As we have previously remarked, this history has the double merit of presenting pictures of the everyday life of ordinary persons in this country from the time of the Norman Conquest up to the present day, and also telling the story in readable and accurate style. Too often it is forgotten that history does not consist entirely of a series of wars and changes in the monarchy, but because of the undue emphasis usually given to these two aspects of history many other features—not the least of which is transport—have been virtually neglected. The period covered by the present volume finishes at 1499 and therefore offers comparatively little scope to the transport historian, but the Quennells, with their customary comprehensiveness, have not overlooked the fact that people did travel and sometimes covered very great distances.

The authors point out that the great high roads of the thirteenth century still followed the direction of the old Roman highways, and many led through large tracts of forest land, which were infested with bands of robbers and outlaws of all kinds. For the greater safety of travellers, the abbots of St. Albans provided armed men to patrol the road between that city and London, such was the terror of these highway robbers. In 1285 a law was passed which decreed that all high roads between large market towns were to be widened, so that no bushes, trees, or ditches were left within 200 ft. of each side of the road. This enactment may be considered the ancestor of all subsequent highway legislation, but its object was not the apparent one of road widening, for the limited demands of the period did not need this. The primary object of the widening was to prevent the highways being flanked with places of concealment for robbers, and landowners refusing thus to clear their land for the required space were thereafter held responsible for any robberies committed on the section of the road passing through their territory.

In the twelfth century the wheeled vehicle was known mainly as a farmcart drawn by oxen. Carts were not used for travel and it was considered rather disgraceful to be seen riding in one, probably because in this way a man condemned to death was taken to the gallows. Ladies rode pillion behind a man-servant, or in litters borne between two horses, and nearly all travelling was done on horseback. Only kings and

great nobles had special carriages, of course by reason of the fact that with the exception of the Romans, none of the early peoples in Central and Western Europe was skilled in road-making.

By the fourteenth century travelling about the country was still a difficult matter and the authors remind us that all Chaucer's pilgrims rode on horseback to Canterbury. Carriages of a sort were used for special or state occasions, and an illustration is given of one that was called a "char." The picture is that from the Luttrell Psalter, and shows all the occupants as ladies. A team of five horses is depicted pulling this cumbersome four-wheeled vehicle, as was doubtless necessary over the rough roads of the period. The twentieth century reader may find it difficult to imagine that this period offered any advantages over the present day, but the authors are not so easily deterred. They point out that the brilliant clothes of both the lady passengers and of the horse-men must have made a goodly and cheerful sight, and draw a comparison unfavourable with today between that scene and a tube-load of people going to the city in black and dingy grey clothes looking dull and miserable, and sorely needing colour to cheer them. As with other volumes of this series, we have no hesitation in recommending it unreservedly as both a delightfully readable volume, and as one of a series of excellent reference works.

**Motor Dictionary. Vol. II. English-French-German.** Second edition. By Benno R. Dierfeld. Berlin, W.8: Verlag Albert Nauck & Co. 9½ in. × 6½ in. 261 pp. Price Rm. 8 net.—Full appreciation of any dictionary can come only from continual use, but even a superficial comparison of this publication with the earlier edition—with which we have become thoroughly familiar—shows that the work has been greatly extended and substantially improved. The present volume gives English words first, in alphabetical order; Vol. I, procurable at the same price, gives the German-French-English sequence, and Vol. III (in preparation) will be French-English-German. Many new terms have been introduced since the first edition appeared, relating to front wheel drives, improved suspensions, diesel engines, producer-gas and compressed-gas vehicles, new auxiliaries, and accessories. All such terms appear to be included in the new edition, using accepted trade and engineering terminology in every case, and the vocabulary also includes the equipment of garages, repair shops, filling stations, types and arrangements of roads, traffic regulations, and so on. The new German standard names for vehicle components are distinguished typographically. Over 6,500 words and phrases are given in each of the three languages, and the dictionary is in every respect suited to the requirements of specialists and laymen alike, whether engaged in the motor industry or driving abroad.

## Rail and Road Competition in Australia

*The States of the Commonwealth have followed individual lines in regulating transport enterprise for the public interest*

By ALFRED W. ARTHURTON, M.Inst.T.

ON my previous visit to Australia I found the railways going through much the same experience, so far as road competition was concerned, as had befallen the railways at home. Road motors were offering constantly increasing competition for passenger traffic and the higher classes of goods, and this led to the passing of Transport Co-ordination Acts in each State. The Acts appointed boards of commissioners which had to decide what road licences were necessary for the development and requirements of that State; and to impose certain conditions on licence holders. These conditions varied somewhat as between one State and another, but it was then too early to assess the full effects of such measures to regulate competition. On the occasion of my visit early this year, however, the railway position in regard to road competition, except perhaps in Victoria, seemed to me to be more stable, and road transport fairly effectively controlled.

In New South Wales the Transport Board, in granting a licence, has power to impose a condition that "the licensee shall pay to them for every passenger carried by the public motor vehicle along a public street a sum not exceeding one penny for each mile or part thereof of his journey," and for vehicles authorised to carry goods "shall not exceed an amount calculated at the rate of threepence per ton or part thereof of the aggregate weight of the vehicle unladen, and of the weight of loading the vehicle is capable of carrying (whether such weight is carried or not) for each mile or part thereof travelled by the vehicle." There are exemptions from the above in the case of journeys not exceeding 20 miles in length, the carriage of goods to the nearest railway station for the purpose of carriage by railway of such goods, and, at the discretion of the board, where an exception is warranted by the state of the roads or the transport facilities in the area served by the vehicle, or for any other reason.

In Queensland road vehicles competing with the railways are taxed at the rate of 1½d. a ton a mile and 1½d. a passenger a mile on all goods and passengers conveyed. These taxes are additional to the ordinary road motor taxation. The licence scale also is fairly heavy, as will be seen from the following:—

TRUCKS HAULING FOR HIRE	Per annum
Carrying less than 1 ton .. .. .	228
.. up to 1½ tons .. .. .	319
.. between 4½ and 5 tons .. .. .	958
BUS TAXES	
Vehicles holding up to 7 passengers .. .. .	440
.. 10 to 20 passengers .. .. .	1,000
Exceptions—Milk and cream from farms; agricultural produce to local markets; cars used for charitable purposes. Trucks bringing goods to railway stations are all exempted from the above licence scale.	

In Victoria the Chairman of the Transport Regulation Board last year estimated that the financial loss in railway freight in respect of goods carried by road which could be suitably carried by railway was about £440,000 a year. This figure represents the lowest possible minimum in an estimate and disregards a considerable amount of traffic carried by means other than by regular licensed hauliers from Melbourne to main railway towns. It would

also have been much greater but for the railways' action in meeting, by freight concessions to traders, the competition of goods hauliers in many of the more important towns. Mr. Harold Clapp, Chairman of the Railway Commissioners, informed me that competition from road transport was very keen, and that the railways had practically scrapped the rate book, the rates in which (as in Great Britain) are apparently on the basis of "what the traffic will bear." The classifications and charges of road hauliers vary considerably for the same commodities and the same distances, and even for different individuals in the same locality; the competition with the railways is largely a matter of rates. Short of a general reduction of railway rates, the railways necessarily conceded attractive rates to traders who were prepared to give the railways all their business.

Mr. Clapp considered that complete co-ordination of all forms of transport by one body into a regulated monopoly was the solution to the problem. Co-ordination between the railways and authorised passenger road services already exists in many parts of the State and, with regard to goods, agreements for co-operation have been reached with local carriers at a number of country centres. Road motor services, both passenger and goods, are also run by the railways themselves at several places.

In Tasmania vehicles competing with the railways are taxed from 2½ per cent. to 8½ per cent. on the revenue earned according to the distance over which they compete.

In South Australia a Royal Commission on Transport has been appointed to investigate the whole question of transport in the State, and at the time of my visit was inquiring into the matter in the other States of the Commonwealth.

Mr. Ellis, the Commissioner of Railways for Western Australia, who has also under his control tramways, ferries, and the electricity supply of the State, was good enough to give me some interesting details regarding the position in his area. In the main, the State Transport Co-ordination Act, which came into operation in 1934, has achieved the purpose for which it was framed. Road competition with the railways has been eliminated, except for relatively short distances, and railway finances, despite the heavy contemporary rebatement of freights, have benefited substantially as a result. This refers to the reduction of rates imposed in expectation of the relief which be afforded under the Act, and amounted to an estimated reduction in railway revenue of £105,000 a year.

Operation of the Act has not unnaturally revealed certain loopholes, and there is reason to believe that the intention of some of the exemption clauses is being evaded; the provision which exempts from licensing goods vehicles operating within a 15-mile radius of the owner's place of business for example. Road hauliers, by establishing places of business at strategic points, are in active competition with the railways for distances up to 30 miles for bricks, firewood, timber, and stone, for the metropolitan area of Perth. Producers are also revealing a tendency to abuse the privilege granted to them of carrying perishable produce from farms and gardens (within a radius of approximately 35 miles) to the metropolis, by conveying back loadings in their vehicles.

## Road Motors for Short-Mileage Work—II

*Abridged from a paper entitled "Commercial Motor Vehicles for Short-Mileage Work: Their Design and Maintenance," presented to the Institution of Automobile Engineers*

By JOHN SHEARMAN, Road Motor Engineer, L.M.S.R.

IN considering the suitability of the average modern vehicle for collection and delivery work, it is interesting to compare it with the post-war vehicle of eighteen years ago. Fig. 8 shows in outline the typical  $2\frac{1}{2}$ -ton vehicles of 1920 and 1938, in which several interesting features are noticeable. The overall lengths are within fractions of an inch identical, as is the position of the rear axle. The front axle has moved nearer the rear axle, thus improving the load distribution between the axles and assisting in the reduction of the turning circle from 56 to 44 ft. In the 1920 vehicle the centre of the load was immediately over the rear axle, with the consequence that none of the load was transferred to the front axle. A better state of affairs exists today, however, approximately 10 per cent. of the load being distributed to the front axle and the remaining 90 per cent. being carried by the rear axle. The body space has increased by better positioning of the cab and bonnet and now occupies 68 per cent. of the overall length instead of 58 per cent., while the load space to wheelbase ratio is now 1.27 instead of 0.95. The chassis and unladen weights of these vehicles are as follow:—

	1920	1938
	Tons cwt.	Tons cwt.
Chassis weight .. .. .	2 5	1 15½
Body weight .. .. .	1 2	0 12
Unladen weight .. .. .	3 7	2 7½
Ratio of pay load ( $2\frac{1}{2}$ tons) to unladen weight .. .. .	1 : 1.34	1 : 0.95

Thus in the interval of eighteen years the chassis weight has diminished by 21.1 per cent., the body weight by 45.4 per cent., and the total unladen weight by 29.1 per cent., for the same carrying capacity. The author wonders whether, at any rate in the higher load capacity class vehicles, this weight reduction has not in some instances

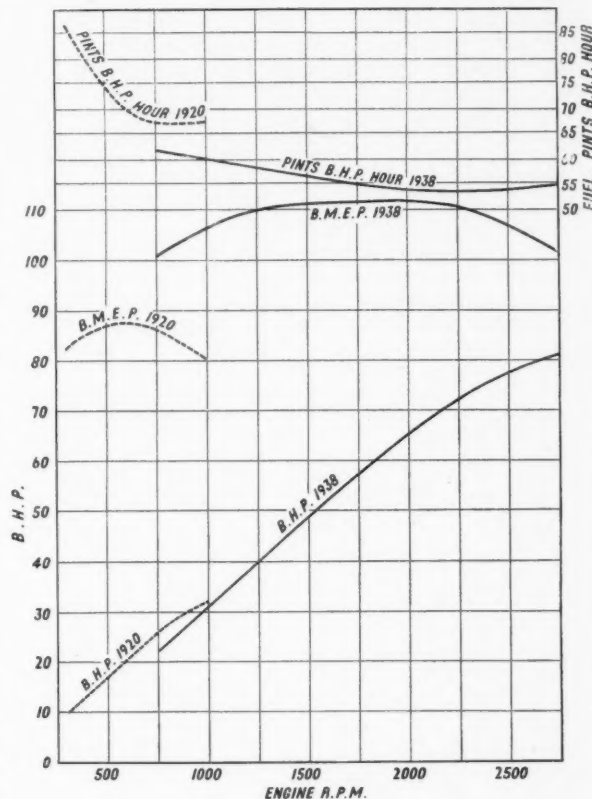


Fig. 9—Comparative power curves of 1920 and 1938

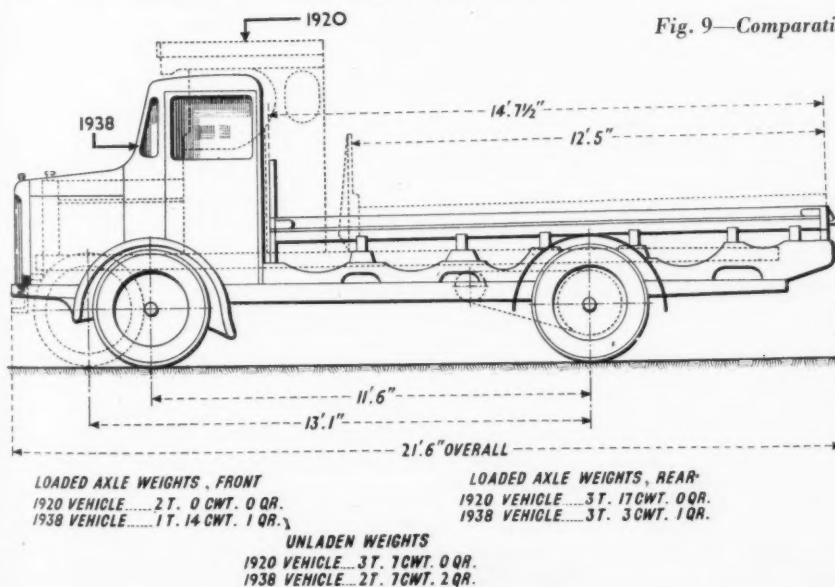


Fig. 8—Comparative diagram of 1920 and 1938  $2\frac{1}{2}$ -ton vehicles

gone too far, resulting in chassis and particularly bodies that are not really up to the loads they are asked to carry. It is interesting to note that the price paid for the 1920  $2\frac{1}{2}$ -ton vehicle was about £800, whereas a vehicle of similar capacity now costs £350.

Even more striking than the change in chassis and body arrangement is the development in two decades of engine design and performance. Details of the engines fitted to typical  $2\frac{1}{2}$ -ton vehicles of 1920 and 1938 are:—

	1920	1938
Bore .. .. .	114.3 mm.	100 mm.
Stroke .. .. .	127 mm.	120 mm.
Swept volume	5,220 c.c.	3,770 c.c.
Compression ratio .. .. .	4.375 : 1	5.8 : 1
Maximum piston speed .. .. .	833 ft. per min.	2,360 ft. per min.

Brake horse-power, mean effective pressure, and specific



fuel consumption are set out in Fig. 9 and shows very clearly the development that has taken place. Whereas the engine of 1920 developed its maximum b.m.e.p. of just over 87 lb. per sq. in. at about 600 r.p.m., the engine of today develops more than 110 lb. per sq. in. at 1,900 r.p.m., and the maximum power developed is in like proportion; that is, 32 b.h.p. at 1,000 r.p.m. and 80 b.h.p. at 2,750 r.p.m. Taking into consideration the swept volume of the engines, the difference is even greater, as these outputs are equivalent to 6.13 and 21.2 b.h.p. per litre respectively. Equally important is the reduction in fuel consumption from a minimum of 0.675 pint per b.h.p. per hr. to 0.535 pint per b.h.p. per hr., and with the modern engine this low consumption is maintained over a large part of the speed range. Increased engine power combined with reduced unladen weight has considerably improved the power to gross weight ratio, which in the examples mentioned is now 0.85 h.p. per cwt. compared with 0.27 h.p. per cwt. eighteen years ago.

A comparison of the two vehicles from a maintenance point of view discloses progress and some disappointments. It seems that, while individual units have improved greatly in performance, the vehicle as a whole has not developed equally satisfactorily from the point of view of the maintenance engineer. Notably accessibility is worse, complication greater, and repairs more difficult to carry out, although with certain dishonourable exceptions, less frequently required. It would seem reasonable to suggest, therefore, that unless and until complete reliability of all units can be achieved, a vehicle built by modern methods and of modern materials, but incorporating more of the accessibility and simplicity of 20 years ago, would provide something nearer the operator's ideal. Commercial vehicle practice lags behind car practice, desirable or not, more or less regularly with an interval of some 3 to 4 years. Instances are the transition from chain to live axle drive, the adoption of four-wheel brakes, pneumatic tyres, unit construction of engine and gearbox, crossbraced frames, pressed steel cabs, electric lighting and starting, and so forth, and even in "sales" features, such as "bird-cage" radiator grilles and pressed mudguards and valances. The same lag is at the present time noticeable in respect of independent suspension. The dividing line, too, between car and light commercial vehicle units becomes less and less well marked, surely an undesirable trend.

### Mechanical Life History of a Typical Vehicle

The amount of attention that has to be given to various components of a motor vehicle throughout its life forms a very interesting commentary on the durability of the various parts. The following summary, although it is obviously not complete in all details, represents the main points found desirable, in the author's experience, under the regular inspection scheme for maintaining a large fleet of mixed vehicles operating on collection and delivery work during the 80,000 to 100,000 miles run during an allotted life of 10 years. Beginning with the engine, the tappets may have to be checked 64 times, the engine decarbonised and the valves ground as often as 30 times, and the exhaust valves renewed probably five times. If cylinder wear is heavy and liners are not fitted, new piston rings will be required 6 times, the cylinders rebored twice before liners are eventually fitted. The crankshaft main and big end bearings are taken up 3 times, and the crankshaft reground and bearings remetalled twice. The timing gears and chains are also renewed on the average twice or four times respectively.

The petrol and oil filters are cleaned 64 times, the engine sump drained and refilled 32 times, and the gearbox and

rear axle similarly dealt with 16 times. The sparking plugs are cleaned and adjusted 64 times and renewed five times. The radiator generally has to be renewed once in the life of a vehicle. The chassis components also have to receive a considerable amount of attention, the steering gear being examined 64 times, and certain wearing items renewed twice to four times. The brakes are examined 64 times, the brake shoe linings renewed 4 times, and the drums renewed or skimmed out 3 times. The clutch is dismantled and the linings renewed on the average 4 times. The road wheels are removed and the bearings examined 16 times and renewed twice. In regard to the electric lighting and starting equipment, the battery has to be replaced 3 times, the lamps on the average 4 times, and the dynamo and starter overhauled 4 times. In addition to this, the complete vehicle is repaired 4 times.

Combined with the foregoing life history of the various components it is important to know the amount spent on each. The amount varies with different makes and types of vehicle, but in the following table a broad average is given based on experience with a large mixed fleet; the costs are given under main headings as a percentage of the total maintenance and repair cost of the vehicle throughout a ten-year life:—

MAINTENANCE COSTS				Percentage of total
<b>Engine—</b>				
Decarbonising, valve grinding, &c.	..	..	..	8.1
Cooling system, radiator, &c.	..	..	..	5.7
Cylinders, rings, pistons, &c.	..	..	..	5.2
Crankshaft, bearings, &c.	..	..	..	4.5
Camshaft, timing gear, &c.	..	..	..	2.9
Oil and petrol system, &c.	..	..	..	2.3
Total engine	..	..	..	28.7
<b>Chassis—</b>				
Brakes and brake gear	..	..	..	8.4
Steering	..	..	..	7.3
Clutch and withdrawal gear	..	..	..	6.3
Gearbox and transmission	..	..	..	5.9
Wheels and bearings, &c.	..	..	..	5.4
Mudguards, bonnet, silencer, &c.	..	..	..	4.9
Springs and shackles, &c.	..	..	..	3.5
Rear axle	..	..	..	2.9
Total chassis	..	..	..	44.6
<b>Electrical—</b>				
Plugs and ignition system	..	..	..	2.3
Lighting and starting system	..	..	..	6.7
Total electrical	..	..	..	9.0
<b>Body—</b>				
Woodwork	..	..	..	8.9
Painting	..	..	..	4.4
Metal work	..	..	..	2.2
Cover sheets, &c.	..	..	..	2.2
Total body	..	..	..	17.7
				100.0

This analysis shows that all the components of a modern vehicle are not equal in the service that they give. A vehicle able to run 100,000 miles without a major complete repair, and with a minimum of periodical maintenance, has long been the author's dream, even if at the end of this period it collapsed simultaneously in all its parts, like Oliver Wendell Holmes's one-horse shay. Already certain parts, such as the gearbox and rear axle, are well on their way to the achievement of this mileage, although other parts lag sadly behind. To this end, as far as it has been possible, many means have been practically investigated in the L.M.S.R. fleet of enhancing the life and durability of wearing parts.

### Diesel Engines

Although compression-ignition engines are not generally considered in connection with short-mileage vehicles, their use even at present fuel prices is economical for the heavier classes of vehicle from 4 tons capacity upwards on a lower

mileage than is generally imagined, provided a long life is granted to them. Apart from questions of economic operation, compression-ignition engines have many advantages which have been proved in 6 years of experience with them and may be summarised as follow:—

- 1.—Greater reliability and easier starting due to the absence of ignition and carburation systems. The sprayers give little trouble if maintained regularly and the injection pumps are extraordinarily reliable over long periods if the fuel is properly filtered.
- 2.—Absence of fire risk and cheaper storage arrangements for fuel supplies.
- 3.—Greater radius of operation with a given fuel tankage and therefore less time lost refuelling.
- 4.—Less frequent valve grinding and improved valve condition due to the lower temperature of operation.
- 5.—Last, and not least, lower maintenance costs. A saving of 10 per cent. in engine repair costs can be shown with the direct-injection type engine (the only type with which the author has had extensive experience) compared with petrol engines of similar capacity.

### The Shape of Things to Come

As a result of many years of experience trying to keep a large fleet of motor vehicles in good order, the author suggests, to complement the mechanical horse group, a broad outline of an unorthodox rigid vehicle, which he believes would be acceptable to many short-mileage operators. The proposed layout suggests methods of eliminating the unsuitable features which he believes to exist in standard modern vehicles, and embodies the points which experience leads him to consider as desirable of incorporation. The principal desiderata for the short-mileage collection and delivery vehicle are:—

- 1.—Large ratio of loading space to (a) overall length, and (b) wheelbase.
- 2.—Small turning circle, giving maximum freedom to manoeuvre.
- 3.—Ease of access to the driver's seat from both sides, together with comfortable driving position.
- 4.—Reasonable maximum speed with good acceleration.

An examination of typical present-day vehicles, both quantity produced and otherwise, on this basis reveals some interesting facts. In the following table a summary is given of the maximum and minimum values of the ratios, 1 (a) and 1 (b), together with the c.c. of engine capacity per ton gross laden weight, of representative makes of vehicles:—

	Carrying capacity		
	2 tons	3 tons	5 tons
1(a) Ratio of load space to overall length:			
Average .. .. .	0.601	0.687	0.695
Maximum .. .. .	0.771	0.780	0.822
Minimum .. .. .	0.464	0.470	0.576
1 (b) Ratio of load space to wheel-base:			
Average .. .. .	1.005	1.056	1.057
Maximum .. .. .	1.492	1.492	1.286
Minimum .. .. .	0.757	0.754	0.878
Engine displacement, c.c. per ton gross laden weight:			
Average .. .. .	801	627	527
Maximum .. .. .	892	667	631
Minimum .. .. .	742	572	427

Fig. 10 shows a vehicle in which notable efforts have been made to improve the load space to overall length ratio. As far as engine capacity is concerned, the lighter vehicles are, for short-mileage work, over-engined. It is suggested that 500 c.c. per gross ton would provide sufficient power without unduly high engine speed (the mechanical horse vehicles have 225 c.c.).

In view of the attention paid to visibility from the driver's cab by the Institution of Automobile Engineers and the Ministry of Transport, it might be thought that



Fig. 10—Karrier Bantam type vehicle for parcels collection and delivery

this matter, and also that of the position of the driver's controls, would now be beyond criticism. Such, however, is unfortunately not the case, and in Fig. 11 are shown the extreme dimensions which have come to the author's notice recently. The extraordinary differences shown here indicate an urgent need for standardisation of important dimensions, in order that the driver may have safe and satisfactory control of the vehicle.

Once the implications of these shortcomings have been accepted and assimilated the basis of a logical "short-mileage" design emerges. Most operators agree that a maximum turning circle of 35 ft. is desirable in a short-mileage vehicle. An examination of the most suitable chassis designs shows that the turning circle is from  $3\frac{1}{2}$  to 4 times the wheelbase, so that taking an average figure the latter is fixed at about 9 ft. 4 in. The ratio of body space to wheelbase has already been examined and, taking the best figure available,  $1\frac{1}{2}$  to 1, the body space comes out at 14 ft. Again taking a good ratio of overall

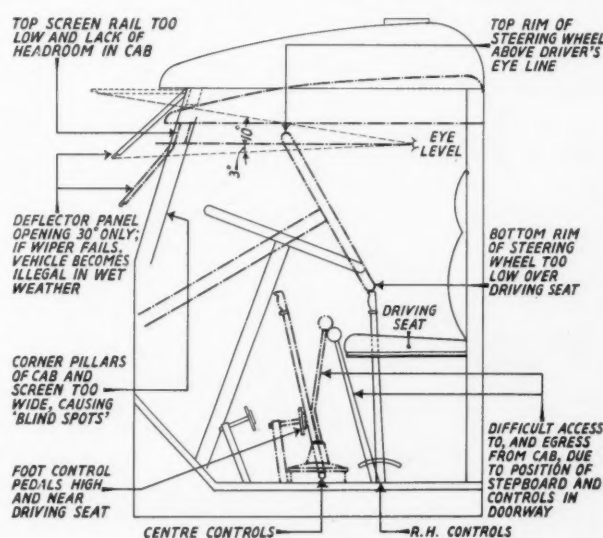


Fig. 11—Diagram showing extreme variations in cabs and controls

length to body space as 4:3, the overall length should not exceed 18 ft. 8 in. These ratios make use of the maximum permissible legal overhang, which, with many other items of design, is governed by Ministry of Transport regulations.

Having thus fixed the leading dimensions of an ideal vehicle, it appears that 4 ft. 8 in. is available for cab space, but complete freedom of access to the driver's seat from each side of the vehicle must be provided. Let it be remembered that the driver has to get in and out of his cab as often as 100 times in the course of a day's work. The normal positioned engine and the cab behind take up as much as 50 per cent. of the overall length of the vehicle, while with the driver-beside-engine type access to the driver's seat from the nearside is nearly impossible. Another position for the engine is therefore indicated; a suitable one would seem to be low down between the main frames of the chassis below the floor of the body. This allows complete freedom in the design of the cab, which would be placed before the front wheels with the floor not more than 1 ft. above road level.

Allowing for a load capacity of  $2\frac{1}{2}$  tons and an unladen weight of 2 tons, the gross laden weight would be  $4\frac{1}{2}$  tons. For short-mileage work 500 c.c. per ton provides sufficient engine power, so that a 2,500 c.c. unit should meet requirements. An air-cooled 2- or 4-cylinder engine is proposed, and a flat horizontally-opposed layout would appear to offer reasonable prospects of satisfactory installation and cooling; magneto ignition, self-starter, side-valves with non-adjustable tappets and hard valve seat inserts; detachable cylinder heads; austenite cast iron liners; chromium plated or surface hardened crankshaft journals; an effective by-pass oil filter and special means to direct oil straight on to the cylinder walls whenever the engine is started are features that should be incorporated. It may be that within the next few years an

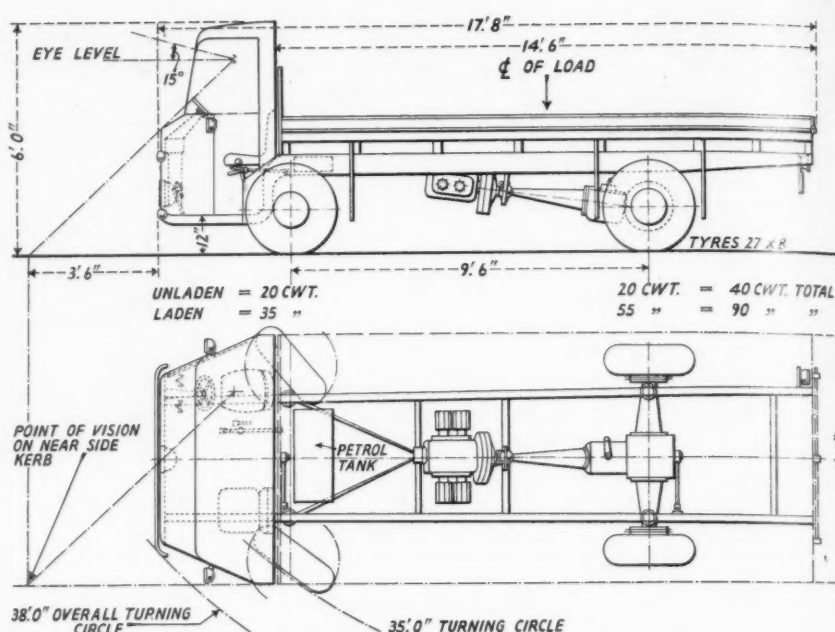


Fig. 12—Outline of the author's suggested vehicle for short-mileage collection and delivery work

The load space/wheelbase is 1:52; load space/overall length 0:82; and cab space/percentage of overall length, 18

air-cooled 2-cylinder compression-ignition engine will be within the range of practical politics, and the author would like to see such an engine successfully developed for this type of vehicle. The engine should be governed to a maximum speed of 2,500 r.p.m., which, in conjunction with 27 in. by 6 in. tyres and a rear axle ratio of 6 to 1, would give a maximum road speed of 35 m.p.h. which is ample. The clutch would be 100 per cent. oversize (judged by present standards) and separate, so that it could be repaired without incurring a major dismantling.

A gearbox with three forward speeds would be provided, the lowest of which would be low enough for the vehicle to climb a 1 in 5 gradient with reasonable overload and would provide a good crawling speed for shunting and manœuvring. Coil springs are suggested for the suspension, both front and rear, and every advantage should be taken of oilless bushes, grouping of leads, and so forth, so as to eliminate as many as possible of the grease nipples and oil holes which are to be found on the present-day chassis.

Simple flat mudguards, easy and cheap to replace and possibly made of flexible material which could be bought by the roll and cut off to the required length, together with rubber hose pipe protection round the sides of the body, would help to reduce expensive damage to vulnerable areas. A fascia board complete with flower holder, cigar lighter, ash tray, and vanity box, is not a feature of the specification. The lighting set would be of the simplest possible type, and with a central distributing panel with separate wires and switches to each unit. One head lamp giving a wide-angle flat-top beam would take the place of the usual twin head lamps and dipping mechanism.

Such in brief are the author's suggestions for a vehicle which he has endeavoured to sketch in Fig. 12, and which he believes would be simple to manufacture, easy to maintain, reliable in use, pleasing to operate, and finally, by virtue of its good visibility, ease of control, and moderate speed, a helpful contribution to safety on the roads.



Albion  $2\frac{1}{2}$ -ton goods lorry of 1925



## Cartage in Southern Scotland

*A brief survey of the cartage work carried out in Southern Scotland by the L.N.E.R. and its agents*

*By L. MEARA, Cartage Manager, Glasgow, L.N.E.R.\**

UNTIL 1880 all the cartage work at North British Railway stations was in the hands of carting contractors and agents, of which the principal firms were Cowan & Company, Mutter, Howey & Company, and J. & P. Cameron. In that year the last-mentioned concern was purchased by the railway company, although the business was carried on as J. & P. Cameron until 1926, from which date the services were performed under the name of the London & North Eastern Railway Company. The equipment transferred to the L.N.E.R. in 1926 consisted of 9 motors and 546 horses, and this formed the nucleus of the present Cartage Department. Cowan & Company (under the name of McFadyen & Company until 1872) has been associated with the railway company since 1851 and still performs the collection and delivery services at 45 stations, mainly in Lanarkshire, Dumbartonshire, and Stirlingshire, with approximately 400 horses. Mutter, Howey & Company has acted as contractor since 1845 and today undertakes cartage services at 23 stations in the area with about 300 horse teams and a number of motors. In addition to these large concerns the railway company has other carting agents who provide collection and delivery services at 48 stations.

### Ingenious Competitive Canvassing

In the early days the carting contractors did practically all the canvassing, and in Glasgow the North British Railway Company had an ingenious method to keep the two concerned—J. & P. Cameron and Cowan & Company—up to scratch. At the end of every quarter the total tonnage collected and carted into the stations by each concern was ascertained, and delivery traffic in the succeeding period was allocated *pro rata* to these amounts. It can be well imagined how each contractor strove to give traders the best possible service to secure traffic in the face of severe competition on the part of the other, not to mention the competing railway companies.

During 1937 the goods train traffic carted by all services was in the region of 1½ million tons, about half of which was dealt with by the railway company's own units, while out of 6,340,000 passenger train parcels carted the company handled approximately 85 per cent. itself. At the end of the year the company's cartage strength consisted of 222 motors and 201 horses, serving 156 stations. The area covered provides a wide variety of scenery, embracing the rugged hills of Argyllshire, Inverness-shire, and Northumberland; the well-wooded "Scott" country; and the rich arable and pasture lands of Angus, Perthshire, and the Lothians. The effect of the climatic conditions and the contours of the various districts on cartage operating costs may not be generally appreciated. For instance, the damp atmosphere along the hillsides tends to retard

motor working and inclines up to 1 in 8 have to be negotiated. There are streets in Glasgow with gradients of 1 in 10.

The normal radius of cartage services does not exceed two miles, but in recent years an important development has taken place in the linking up of villages and hamlets with rail by extending the area covered by motor up to ten miles. Such a service is given at approximately 300 stations, and many farmers, who formerly had to



[Photo]

[A. T. K. by]

Direct loading from road vehicle to rail at High Street station, Glasgow, L.N.E.R.

make their own arrangements for conveying traffic to and from the railway station, now avail themselves of these facilities. Efforts in this respect have by no means reached finality, and the ultimate aim is to provide road feeder services between every village of any importance and the railway. Motor services have also been provided for merchandise and passenger train traffic in place of train services withdrawn from six branch lines. The most recent of these—between Spean Bridge and Fort Augustus, a distance of 24 miles—gives an illustration of the advantages gained by the people in the district. The villages formerly served by the railway adjoin the road and the inhabitants are now given a collection and delivery service by motor to their door, whereas in the past it was necessary for the village grocer to go over one and a half miles to the nearest station to collect the bread sent daily from Glasgow.

### Variety at Montrose

Extraneous services such as the movement of tranships between station and station to expedite transit time, the cartage of sheets, ropes, and sacks, and similar services for other departments are also undertaken by the Cartage

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Department. Probably at no other station on the system are such varied cartage services performed as at Montrose. These include the hiring of two horses with neck collars only to the local brewery, the collection direct from boats on the River Annat of mussels for bait, and the loading at the foreshore and two other points of sand and gravel for sale to local builders and the Town Council. As a matter of fact the L.N.E.R. provides the transport for the Town Council and acts as general carting agent for all requirements of the local traders.

When it is remembered that it is the Cartage Department which maintains direct contact with the trader, the importance will be appreciated not only of efficient cartage services but of the manner in which carters and motor drivers perform their duties. Many members of the cartage staff are ideal canvassers, and the following is an illustration of how they are appreciated by traders. The recent re-organisation of a large manufacturing firm in the West of Scotland involved a change in the station from which the traffic would be forwarded. The manager telephoned to ask if motor driver "A" could be transferred to the new station to deal with the traffic, explaining that the driver was fully conversant with the firm's requirements and was in effect its "transport manager."

Much can be said regarding the respective value and utility of the horse team and the mechanical unit. The average length of service of a horse vies very closely with the average life of a motor, so that in making a comparison capital cost, running costs, and work done have to be taken into consideration. A full analysis of the two services would occupy too much space, but one or two outstanding points are worthy of mention. There is no doubt that traffic conveyed by motor can be dealt with more expeditiously from all points of view. Experience shows that the speed of the horse governs the movements of a carter and promotion to the faster moving motor vehicle has the psychological effect of increasing his speed of operation. This consideration also applies to traders' employees, who are prone to give more attention to mechanical units than to horse-drawn vehicles. So far as distances covered are concerned, the balance of advantage undoubtedly lies with the mechanical vehicle, but no motor in the service could equal the record of a draught horse, *Rattler* by name, which stood 18 hands high and was the property of J. & P. Cameron. He carted an average of 30 cwt. between Cupar, Kirkcaldy, and Dundee—a distance of 120 miles a week—for 15 years and was never absent from duty for one day during that long period. Had every horse come up to this standard, mechanisation would hardly have reached its present extent.

Complete mechanisation is hardly practicable or desirable—the effect on the farming industry which is assisted by purchases of oats, hay, and so forth, would be considerable. Moreover, some firms definitely decline to have a motor vehicle on their premises. First class provender, for the purchase of which the cartage manager is responsible, is an essential in the health and life of the horses. The grain and hay are carefully examined at the corn stores, Portobello, where all the provender for Scotland is manufactured, and any not up to standard is returned to the sender. The animals have a ration of 2 cwt. of mixed corn a week in the following proportions: oats, 94 lb.; hay, 84 lb.; straw, 28 lb.; bran,



Photo]

[Scottish Pictorial Press

Loading sugar beet in the South of Scotland

14 lb., though this is slightly reduced during the winter months when turnips or carrots are used. The health of the horses has to be watched carefully, sympathetic consideration being necessary to get the best out of every animal. A cold, for instance, if not treated promptly, might have serious results, and it is the duty of the stable foreman to look after this side of the business, reporting to the cartage manager every day the horses sick, lame, or resting. Just like human beings horses may be "run down," although there is nothing seriously wrong, and in such cases arrangements are made for their being sent to a farm for rest and recuperation.

Close co-operation exists between the Mechanical Engineer (Scotland) and the Cartage Manager for the maintenance of motors. The Mechanical Engineer, who is responsible for repairs, follows a definite routine and makes a request for cars to be sent to the shops for overhaul when a certain mileage has been covered. Minor defects are dealt with on the spot by mechanics stationed at what might be termed the strategic points in the area, thus reducing travelling time and loss of car hours to a minimum.

While the Cartage Department is first and foremost a feeder to the railway, traffic sometimes cannot be secured for rail conveyance and an endeavour is made to convey by road throughout and so retain contact with the customer. In the latter event the Cartage Manager is in precisely the same position as an independent road haulier. He has to weigh up the costs of operation and quote accordingly, always having in view that the rate is such as will not have a detrimental effect on railway forwardings of similar traffics.

An important development in the Cartage Department in recent years has been the presentation of the company's applications for licences under the Road & Rail Traffic Act, 1933. In addition, work in connection with objections against road hauliers' applications under that Act are focused in a joint office under the Cartage Manager acting for the Goods Manager and Passenger Manager.

The cartage manager is given an opportunity of recommending to the goods and passenger managers the type of motor most suitable to meet the requirements of the area and has to see to the buying of new and the selling of old horses. District officers, agents, and staff all co-operate towards the efficient operation of the cartage services and it is amazing with such a large number of units how things work so smoothly.

## Overseas Notes

### Roads in the Balkans

Credits amounting to 200 million leva (£500,000 at par) have been allotted by the Bulgarian Ministry of Public Works towards the improvements of the country's roads, particularly the international routes, and construction is now under way.

### Mediterranean-Cape Road

With the recent completion of the motor highway from Kasongo, on the Upper Congo, to Costermanville, on Lake Kivu (also in Belgian Congo), the last link in a motor road from Algiers to Cape Town has been finished.

### Road Transport in Greece

Road transport in Greece has now been made complementary to the State and other railway services, according to the Report on Economic and Commercial Conditions in Greece, issued by the Department of Overseas Trade (H.M. Stationery Office, 1s. 6d. net). This has necessitated the elimination of much of the competition which existed previously and the limitation of the number of vehicles in operation. The importation of motorcars into Greece has been restricted, and one effect of this is noticeable in the taxicab services, consisting of shabby decrepit vehicles, which do not compare with those of other European countries. On the other hand, taxicab fares are exceedingly cheap. An increase of 50 per cent. has recently been authorised in the import quota for motor vehicles. In 1937 there were 9,410 passenger vehicles, 5,000 lorries, and 1,700 motorbuses, or a total of 16,110 vehicles in circulation.

### Traffic Co-ordination in Copenhagen

The most striking recommendation contained in the report of a commission appointed to investigate the possibilities of co-operation between the various railway, tram, and bus undertakings serving Copenhagen, is that a new "joint-ticket" should be introduced, which would cost 30 øre (about 3d.), and be available for one hour on any of these three forms of transport. This ticket would be a development of the municipal tram and bus ticket in force since 1936, which, however, would be retained and extended to include one hour's travel by electric train between Hellerup and Valby or Vanløse and Frederiksberg, without enhancement of the 25-øre fare. Either of these tickets would be available for any number of journeys within the limits of time and route specified. The single-journey tickets at present in force on the State Railways suburban electrified lines between the stations just mentioned are of the zone category; a 20-øre ticket covering journeys up to six stations, and a 30-øre ticket available over the whole city line. The commission recom-

mends the abolition of the 20-øre and the reduction of the 30-øre ticket to 20 øre. These 30-, 25-, and 20-øre tickets would, as at present, be subject to a supplement of 5 øre when used on buses or night trams. Other suggestions in the report are that the receipts from the joint tickets shall be shared equally between the State Railways and the tramways, that various tram and bus stops shall be moved to give better connections with the railways, on which the present 20-min. service might be improved.

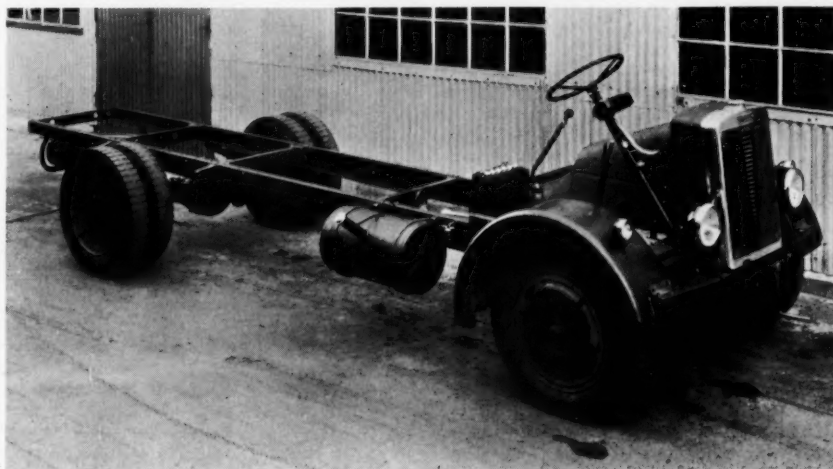
Owing to the continued refusal of the municipality to permit buses radiating from Copenhagen to proceed from the centre of the city, and its insistence on their starting from the city boundaries, the commission could not reach a unanimous agreement on this important point. As a compromise, it was, however, recommended that these bus lines should be extended to the nearest railway stations on the city line.

The innovations recommended now await the sanction of Parliament and Copenhagen Municipality before they can be introduced. Meanwhile, it is expected that they will reduce street traffic congestion appreciably, and that, though there is unlikely to be any considerable increase in the 145 million passengers carried annually by the tramways, there will almost certainly be a heavy increase in the 6 millions at present using the State Railways city line. The extension of railway electrification to the Valby-Vanløse-Ballerup section in 1941, thus completing the electrified circle Hellerup-Nørrebro-Vanløse (Frederiksberg)-Valby-Copenhagen Central-Hellerup; is sure to enhance still further the State Railways suburban traffic.

### New Buses for the New York World's Fair

An order has been placed with the Yellow Coach Manufacturing Company (a division of the General Motors Truck Corporation), for 100 motorbuses which will form the intramural bus system at the New York World's Fair of 1939. Two of the buses have already been delivered for tests, twenty-five will be available on March 1 for training personnel, and the remainder are to be ready on April 1. The buses are to be 45 ft. long and 9 ft. wide, and will operate over ten miles of Fair highways on two major routes. They will be rear-engined vehicles, and, as the 10-cent fares will all be prepaid, the buses will be one-man operated. There will be two longitudinal seats, each facing outward to give passengers a clear view of the Fair grounds. This double row of seats will accommodate sixty persons, while the space between them will provide standing room for another sixty passengers. It is planned to operate headways of 30 seconds to three minutes, depending on crowd density, and for the most part the buses will operate over roadways from which pedestrian traffic is excluded.

*John I. Thornycroft & Co. Ltd. has received a further repeat order from the Great Western Railway for 28 chassis comprising 20 Nippy class 2½-ton forward-control type and eight Trusty class 7-ton chassis, four of which will be fitted with auxiliary gear-boxes and Neates trailer brake gear for towing a trailer. The other four machines will be used solo. The Nippy class chassis, illustrated alongside, incorporates a 10 ft. 1½ in. wheelbase, 60 b.h.p. 4-cylinder petrol engine, full floating spiral bevel rear axle, Lockheed operated Girling brakes, and a frame having a maximum depth of 7 in.*





## John Henry Follows

WE regret to record the death, at his home in Derby on December 13, of Mr. John Henry Follows, C.V.O., C.B.E., J.P., who retired from the position of a Vice-President of the L.M.S.R. on March 1, 1932. Mr. Follows was a personal associate of, and assistant to, the late Sir Cecil Paget, and was generally regarded as his successor in operational methods. It is, therefore, a sad coincidence that the death of Mr. Follows should occur almost exactly two years after that of Sir Cecil Paget.

Mr. Follows may be said to have been born a railwayman, for his father, Mr. A. Follows, was for 40 years in the

service of the Midland Railway Company. Mr. J. H. Follows was born in 1869 at Sandiacre, Derbyshire, on the Erewash Valley line, and was educated at Risley Grammar School, in Derbyshire. He entered the railway service in June, 1890, at the age of 20, and, after passing through various grades, was appointed Stationmaster at Sawley, on the Trent and Derby line, in 1895. Two years later he was promoted to the position of Assistant District Inspector at Normanton. In April, 1901, he was appointed Traffic Inspector with headquarters at Derby, and in December of the same year was given charge of the whole Derby district as Traffic Inspector. Mr. Follows was transferred in 1907 to the personal staff of the General Superintendent, Sir Cecil Paget, to assist in the introduction of the Midland Railway system of traffic control. On the accomplishment of this important work he was appointed in 1911 as Superintendent of Freight Trains, and became Divisional Superintendent the following year. His duties then embraced practically the whole of the Midland Railway system, and two years later he was made Superintendent of Operation. In 1917 Mr. Follows was appointed to be Acting General Superintendent in the absence of Lt.-Colonel Paget on active service, and, on the retirement of the latter in 1919, succeeded to the post of General Superintendent of the Midland Railway. On the formation of the L.M.S.R. he was appointed Chief General Superintendent of the system and took office at the beginning of 1923.

On January 1, 1926, Sir Josiah Stamp, assumed the newly-created position of President of the Executive, and towards the end of the same year it was announced that, with the retirement of Mr. H. G. Burgess from the general management, the executive control of the company's business would be vested in the President of the executive assisted by four vice-presidents, the Secretary, and the company's legal adviser. The first appointments of vice-presidents were made as from January 1, 1927, and Mr. Follows became a member of the executive committee from its formation, with the title of Vice-President for Railway Traffic Operating and Commercial Sections. This position he continued to hold until his retirement from active service on March 1, 1932. Although then severing his direct connection with railway management, he continued to represent the interests of the L.M.S.R. on the boards of the Scottish Motor Traction Co. Ltd., and other road transport undertakings in which the L.M.S.R. has shareholdings. At the time of his death Mr.

Follows was a Director of the Scottish Motor Traction Co. Ltd., the Central S.M.T. Co. Ltd., the Western S.M.T. Co. Ltd., W. Alexander & Sons Ltd., and the Trent Motor Traction Co. Ltd.

Mr. Follows held the rank of Lt.-Colonel in the Engineer & Railway Staff Corps, and in 1917 was a member of the special military commission to Italy. He resigned his commission when he retired from the vice-presidency of the L.M.S.R., but retained his rank with permission to wear the prescribed uniform as from April 6, 1932. In the summer of that year he undertook to report on railway operation in

Argentina and left England in the early days of June. In the same issue of THE RAILWAY GAZETTE in which we recorded his departure, we also had the pleasure of announcing the inclusion of his name in the King's Birthday Honours as the recipient of a C.V.O.

His retirement in 1932 enabled him to devote more time to hobbies and outside interests and he was a well-known figure in Derbyshire circles. He was a member of the local Unemployment Assistance Board; a representative of the Agricultural Wages Board; Vice-Chairman of the Belper Juvenile Court; a member of the Railway Servants' Orphanage Committee; President of the L.M.S. (Midland Division) Horticultural Society; President of the L.M.S. local Ex-Servicemen's Association; President of the Railway Veterans' Association; a member of the Derbyshire County Cricket Club Committee; and a Director of the Derby County Football Club. His activities in Church life had always been enthusiastic and sincere, and he was a member of the Bishop of Derby's Appeal Fund Committee. With a dislike of self-advertisement, Mr. Follows nevertheless was proud of the letter written to him in 1932, by the King's Secretary:—

"The King and Queen were delighted to see that your railway services have been so greatly appreciated as have been your personal services to Their Majesties. During your career in the Midland and London Midland & Scottish Railways you have been responsible for many royal journeys, all of which have gone without a hitch of any kind. The King and Queen will always have the pleasantest recollections of your associations with the royal train, and trust that you may long enjoy the peace and leisure which you so fully deserve."

The following tribute is paid by Lord Stamp:—

"John Follows was beloved of all who knew him, for he had a great, simple, generous, yet shrewd approach to life and all its problems. He was a great colleague and a greater friend, and I counted myself fortunate when I entered the railway world that I was so intimately associated with him. His natural talents raised him to high position and his ripe experience was an asset of the greatest value to the L.M.S. in its formative stages. He had an enthusiasm and a devotion to duty which made him an inspiration to all those under him and around him. He was indeed one of Nature's gentlemen."

[An appreciation by Sir Guy Granet appears on page 1059.]



Lt.-Colonel J. H. Follows, C.V.O., C.B.E.

## RAILWAY NEWS SECTION

### PERSONAL

Mr. G. Cole Deacon, who has been Secretary of the Railway Companies' Association since 1929, was educated at Bedford School. In 1914 he became an Assistant Solicitor to Mr. R. Hill Dawe, Solicitor to the Great Northern Railway. In 1919 he joined the London & North Western Company and shortly after the amalgamations became Chief Parliamentary Assistant to Mr. Thornhill, the Chief Legal Adviser to the London Midland & Scottish Company. Subsequently he was appointed Chief Assistant Solicitor for matters arising under the Railways Act, 1921, especially in relation to the proceedings before the Railway Rates Tribunal. In 1920 Mr. Cole Deacon acted as Secretary to the Special Committee of General Managers and Solicitors which was set up to prepare and present the railway companies' case before the Rates Advisory Committee, whose report resulted in the passing of the Railways Act, 1921. In that year the Railway Rates and Charges Committee was formed to represent the railways in the proceedings before the Railway Rates Tribunal for the settlement of the classification, standard revenue, standard charges, and so on, under the provisions of the Railways Act, 1921. These proceedings lasted six years, during which time Mr. Cole Deacon became a well-known personality in both railway and industrial



*Railway representatives at their second "square deal" meeting with the Minister of Transport, on December 8*

*Left to right: Lord Palmer (Deputy-Chairman, G.W.R.), Sir Ronald W. Matthews (Chairman, L.N.E.R.), Sir Ralph L. Wedgwood (Chief General Manager, L.N.E.R.), and Chairman, General Managers' Committee, Railway Companies' Association), Lord Stamp (Chairman and President of Executive, L.M.S.R.), Mr. R. Holland-Martin (Chairman, Southern Railway), and Dr. Leslie Burgin, the Minister of Transport*

circles. In 1932 the railways pressed for the establishment of a fair basis of competition and division of function between road and rail transport of goods, and, as Secretary of the Railway Companies' Association, Mr. Cole

Deacon was in charge of the claim for "fairplay for the railways." This resulted in setting up the Salter Conference, to which he was appointed Joint Secretary; the outcome of the findings of that conference was, of course, the passage of the Road & Rail Traffic Act of 1933. Mr. Cole Deacon is at present organising, through the Railway Companies' Association, the railway "square deal" campaign.



*Mr. G. Cole Deacon who, as Secretary of the Railway Companies' Association, is conducting the "square deal" campaign*

The Hon. Charles Percy Fullerton, K.C., LL.B., formerly Chairman of the Trustees of the Canadian National Railways, whose death we announced in our issue of October 14, was born at Amherst, Nova Scotia, on July 18, 1870. Educated in his birthplace and at Dalhousie University, he was admitted as a barrister in 1895, and practised as such in Nova Scotia until 1900, and thereafter and until 1906 in Sydney, New South Wales. He was Mayor of Sydney in 1903. He returned to Winnipeg in 1906 and became a member of the Manitoba Bar, and five years later was appointed a King's Counsel, and in 1912 Puisne Judge of the Manitoba Court of Appeal. In August, 1931, Judge Fullerton was appointed Chairman of the Board of Railway Commissioners for Canada, from which position he retired in December, 1933, to become Chairman of the Trustees, C.N.R.

Señor Trifon Gomez has been appointed by the Republican Government in Barcelona to the post of

General Director of the recently-constituted Central Committee, which is charged with the purchase and distribution of supplies for both the civil population and the army. Señor Gomez was for many years the Socialist leader of the Railwaymen's Section of the General Union of Workers in Madrid.

Mr. M. A. Cameron, who, as recorded in our issue of December 9, has been appointed to succeed Mr. J. W. Oddy as Assistant to the Passenger Manager (Southern Area), L.N.E.R., was educated at Fettes College and Edinburgh University, and joined the



**Mr. M. A. Cameron**

Appointed Assistant to the Passenger Manager, (Southern Area), L.N.E.R.

London & North Eastern Railway in 1926. Subsequently he gained experience as a traffic apprentice and as temporary Assistant Yardmaster, West Hartlepool (1929); and, after a brief period in the Chief General Manager's office, joined the office of the Passenger Manager, Southern Area. In 1933 Mr. Cameron was made head of the special section for dealing with pooling arrangements, and was in charge of the Northern Belle during the tours in 1934. In the following January he was appointed Assistant District Passenger Manager, London, L.N.E.R. In February, 1937, Mr. Cameron was appointed District Passenger Manager, Leeds, the position he will vacate on succeeding Mr. Oddy at the end of January next year.

We regret to record the death on November 15 of Herr Max Lüdike, who retired from the position of Reichsbahndirektor on December 31 last year. Herr Lüdike was in charge of the Rates and Commercial Sections of the Reichsbahn Divisional Management in Berlin, and a Member of the Management of the Central European Railway Association. He edited the journal of

that association, the *Zeitung des Vereins Mitteleuropäischer Eisenbahn-Verwaltungen*.

#### SOUTHERN RAILWAY APPOINTMENTS

The Southern Railway announces that the following appointments have been made, to take place as from January 1, 1939:—

Mr. G. Bishop, Assistant for Fares and Rates, Commercial Superintendent's Office, has been appointed Assistant Southern Divisional Superintendent, Southampton Central, *vice* Mr. F. P. Watts (retiring).

Mr. A. M. Bow, Chief of Rates and Charges (Freight Section), Commercial Superintendent's Office, to be Assistant for Fares and Rates, Commercial Superintendent's Office.

Mr. J. M. Leighton-Bailey, Cadet, General Manager's Office, and Mr. F. V. Spillard, Clerk, Office of the Superintendent of Operation, have been appointed Outdoor Assistants to the Superintendent of Operation.

Mr. Walter Wachs has been appointed Chief Engineer for the Second Division of the Swiss Federal Railways, as from January 1, 1939. He has been in the service of the Federal Railways since 1912, and was particularly concerned in the extension of Zurich station and the Berne-Wilerfeld deviation. He has also been in charge of the Federal Railways service for air-raid precautions.

Mr. Eugen Labhardt, who has been Manager of the Second Division of the Swiss Federal Railways in Lucerne since 1927, will be retiring at the end of the present year. The present Chief Engineer of the Division, Mr. Cesare Lucchini, has been appointed as his successor.

Mr. Lucchini, who was born in 1885, entered the service of the former Gotthardbahn in 1908, and afterwards remained with the Federal Railways. He was connected with the doubling of the southern end of the Gotthard route, the enlarging of Chiasso station, and construction of the Ritom and Barberine power-stations. Appointed in 1926 Assistant to the Chief Engineer in Berne, he was transferred in 1930 to the headquarters of the Second Division at Lucerne as Chief Engineer, which post he is now relinquishing.

From *The London Gazette* of November 25: Regular Army Supplementary Reserve of Officers, Royal Engineers, Transportation: David Ross Mangles (late Cadet, Marlborough College O.T.C.) to be Second Lieutenant (November 26).

From *The London Gazette* of November 29: Territorial Army, Royal Engineers, Engineer & Railway Staff Corps: William Thomson Halcrow, M.Inst.C.E., M.I.Mech.E., M.Inst.W.E., to be Colonel (November 30).

From *The London Gazette* of December 9:—

Regular Army, Commands and Staff: Major C. S. Napier, R.E., from Brigade Major, 1st Anti-Aircraft Brigade, to be Deputy Assistant Director of Transportation, War Office (November 28).

Regular Army Reserve of Officers, Royal Engineers, Transportation: Captain F. C. C. Stanley, from Supplementary Reserve of Officers, to be Captain (December 10), retaining his present seniority.

Mr. F. C. C. Stanley, whose resignation from the post of District Passenger Manager, Newcastle, L.N.E.R., was



**Mr. F. C. C. Stanley**

Appointed Managing Director, B. & N. Line Royal Mail Limited

recorded in our issue of August 5, has been appointed Managing Director of B. & N. Line Royal Mail Limited. Mr. Stanley was born in 1900 and educated at Birkenhead School and Pembroke College, Oxford. He joined the former North Eastern Railway at York as a Traffic Apprentice in 1922, and gained experience in the Commercial and Operating Departments at various places, in what afterwards became the North Eastern Area of the L.N.E.R. At the end of 1926 he was transferred to the Chief General Manager's Office as Assistant to the Industrial Agent, where he remained until appointed Assistant to the Goods Manager, Southern Area, at Liverpool Street in July, 1929. After serving for three and a half years at Liverpool Street, Mr. Stanley was appointed Acting District Goods Manager, Liverpool, in January, 1933. In July, 1934, Mr. Stanley succeeded Mr. R. A. Newman as London Suburban District Goods Manager at King's Cross. He was appointed District Passenger Manager, Newcastle in June, 1937. Mr. Stanley left the service of the railway company at the end of July this year on his appointment to succeed Mr. H. J.



Jewell as Managing Director of B. & N. Line Royal Mail Limited, who is retiring at the end of the present year. Since leaving the railway company Mr. Stanley has spent three months travelling in Norway.

#### INSTITUTION OF CIVIL ENGINEERS

The following associate members of the institution have been transferred to the class of full Member:—

Mr. W. Y. Sandeman, Assistant Engineer, Southern Area, L.N.E.R.  
Mr. Gilbert S. Szlumper, C.B.E., General Manager, Southern Railway.

The late Mr. Frederick Liddell Steel, a Director of the L.N.E.R., whose death on September 6 was recorded in our issue of September 9, left estate of £289,913 (£288,330 net).

Mr. George H. Pabst, Jr., who for the last nine years has been Treasurer of the Pennsylvania Railroad, has been promoted by action of the board of directors to Assistant Vice-President and Treasurer, as from December 1. Mr. Pabst has been in the service of the Pennsylvania Railroad continuously since 1906, starting as a clerk in the Accounting Department.

Mr. A. J. County, Vice-President of the Pennsylvania Railroad in charge of finance and corporate relations, retired from active duty on November 30, after 48 years in the company's service. During his long service, Mr. County played an important part in shaping the corporate and financial structure of the Pennsylvania Railroad and its affiliated companies and in advancing, from the corporate standpoint, important construction and improvement projects undertaken by the company. A native of Dublin, Ireland, Mr. County went to the United States as a young man, and was at first engaged in a clerical capacity in the office of the Secretary of the Pennsylvania Railroad at Philadelphia. He was made Assistant Secretary of the company in February, 1901, and from 1906 to 1912 was Assistant to the Vice-President. In 1913 he was appointed Special Assistant to the President, and in this position had much to do with the consolidation of many smaller railroad properties within the Pennsylvania Railroad system. He was also a prominent figure in the railway's great tunnel and terminal project at New York, through which the company's lines were extended into the heart of Manhattan, with a direct rail connection to New England. On March 8, 1916, Mr. County was appointed Vice-President in charge of accounting, and in May, 1923, became Vice-President in charge of accounting and corporate work. Two years later he was also given jurisdiction over the Treasury Department, and on June 1, 1929, became Vice-President in charge of finance and corporate relations. Mr. County also served as an officer and Director of practically all the

subsidiary companies in the Pennsylvania Railroad system.

Mr. W. W. Swinden, Superintendent of the sleeping and dining car services of the Canadian National Railways, has been elected Chairman of the Advisory Board of the American Association of Superintendents of Dining Cars.

#### SOUTH AFRICAN RAILWAYS

##### APPOINTMENTS

Mr. J. S. Corbett, Chief Clerk, Chief Mechanical Engineer's office, Pretoria, to be General Secretary, Sick Fund, Johannesburg.

Mr. E. A. Coppack, Local Accountant, Durban, to be Revenue Accountant, Johannesburg.

Mr. E. C. E. May, Principal Clerk, Chief Accountant's Office, Johannesburg, to be Chief Audit Inspector.

Mr. W. G. Phillips, Inspector (Police), Durban, to be Assistant to Chief of Police and Investigations, Johannesburg.

Mr. W. E. Turnbull, Acting Assistant General Manager (Commercial), has been confirmed in that appointment.

Mr. J. D. White, Acting Chief Traffic Manager, has been confirmed as Chief Traffic Manager.

Mr. R. G. Forbes, System Manager, Johannesburg, has been appointed Assistant Chief Traffic Manager.

We regret to record the death at Worthing on Sunday, November 27, of Mr. Percy Edwin Lephard, Chairman of the Wilts & Dorset Motor Services Limited. Mr. Lephard, who was 59 years old, was associated with Messrs. A. E. Cannon and A. D. Mackenzie of the Southdown Motor Services Limited in establishing motorbus services in the Salisbury area some 24 years ago. The Wilts & Dorset Motor Services Limited has been an associated company of the Southern Railway since 1931.

Mr. J. Hamilton Cheston, and Mr. John C. Traphagen have been elected directors of the Baltimore & Ohio Railroad Company. Mr. Hamilton Cheston is Vice-President of the Philadelphia Saving Funds Society, and Mr. Traphagen is President of the Bank of New York.

We regret to record the death on December 9 of Mr. Charles Booth, Chairman of the Booth Steamship Co. Ltd. (of which his father, Mr. Alfred Booth, was the founder) and a Director of the L.M.S.R. Mr. Booth's railway associations dated from 1898, when he joined the board of the former Midland Railway, of which company he became Deputy Chairman in 1918. He was made a Director of the L.M.S.R. on grouping. He represented the L.M.S.R. on the Cheshire Lines Committee and the Manchester South Junction & Altrincham Railway, and was a member of the L.M.S.R. (N.C.C.) Managing Committee. Since 1924 Mr. Booth had

served on the directorate of the Mersey Docks & Harbour Board, and had been President of the Liverpool Steamship Owners' Association, and the Liverpool Shipbrokers' Benevolent Society.

We regret to record the death in Toronto on December 1, at the age of 80, of Mr. David Blythe Hanna, the first President of the Canadian National Railways. Mr. Hanna was born at Thornliebank, Glasgow, and worked for eight years as a railway clerk in Scotland before going to Canada in 1882. There, in 1896, he was appointed Superintendent of the Lake Manitoba Railway, the genesis of the Canadian Northern system, of which Mr. Hanna subsequently became third Vice-President in charge of operations. Mr. Hanna was appointed President when the Canadian Northern was taken over by the Government in 1918 as the basis of the Canadian National system, and held that office until succeeded on his retirement in 1922 by Sir Henry Thornton.

Major J. M. Dewar, Publicity Officer, Great Western Railway, has been appointed Chairman of the Advertising and Public Relations Committee at the Railway Clearing House for the year 1939.

#### JOHN FOLLOWS

The funeral of Mr. John Henry Follows, of whom an obituary notice appears on page 1056, takes place today (Friday) at Littleover church, Derby, at 1.30 p.m. We have received the following appreciation of Mr. Follows from Sir W. Guy Granet:—

The passing away of John Follows removes another well-beloved personality in the railway world. Most of his railway life was spent on the Midland Railway where he stepped on practically every run on the ladder. But it was not until he was discovered by the late Cecil Paget that his outstanding merits came to be appreciated. Paget was a good and stimulating chief to those in whom he had confidence, and under his tutelage Follows developed in a way that made him an outstanding success as General Superintendent of the Midland Railway.

The basis on which he built up his success was partly the detailed knowledge of the line and its working difficulties which he acquired by days and nights spent on the line, and partly the capacity which his generous and loyal nature showed for getting the best out of those who worked with him and for him.

When the amalgamation came he went to Euston and soon became Vice-President. There also he made his mark and acquired the friendship and trust of all with whom he worked.

His loss is a very real one to the large number of his friends and to me with whom he was associated for so long it leaves a gap which I can never hope to fill.

W. GUY GRANET

## Progress of the "Square Deal" Campaign

The two memoranda submitted to the Minister of Transport by the railways have been sent to the Transport Advisory Council, which is requested to take the matter "into very early consideration"

In accordance with his decision announced at a meeting with the railway chairmen and general managers on December 8, the Minister of Transport has sent to the Transport Advisory Council the two memoranda already submitted to him by the railways (set out in our issues of December 2 and 9), and the terms of reference under which the council is requested to consider the railways' proposal that the existing statutory provisions relating to the charges for the carriage of merchandise traffic by rail should be repealed.

### Submission to Transport Advisory Council

The letter (dated December 12) from the Permanent Secretary of the Ministry of Transport to the Transport Advisory Council, requesting the council to review the railways' proposals, read as follows:—

"I am directed by the Minister of Transport to state for the information of the Transport Advisory Council that he has been approached by the four main-line railway companies with a proposal that the existing statutory regulation of the charges for the conveyance of merchandise traffic by railway, together with the requirements attached thereto, including such matters as classification, publication, and undue preference, should be repealed. The nature of the companies' proposals is explained in two memoranda submitted to the Minister by the Railway Companies' Association, and copies of those memoranda are transmitted herewith. The Minister would be glad if the council would take the matter into very early consideration and report to him as expeditiously as possible under the following terms of reference:—

To consider the memoranda which have been submitted to the Minister of Transport by the Railway Companies' Association in connection with the proposal of the main-line railway companies that the existing statutory regulation of the charges for the conveyance of merchandise traffic by railway, together with the requirements attached thereto, including such matters as classification, publication, and undue preference, should be repealed and to make recommendations.

"In transmitting this matter to the council the Minister feels that it may be of assistance to them to learn that, as at present advised, he is inclined to the view that in existing circumstances there is, *prima facie*, a case for some material relaxation of existing statutory regulations, provided that due regard is had to the ultimate objective of the co-ordination of all forms of transport.

"The Minister would ask the council, in framing their recommendations, to consider particularly and advise him:—

(a) Whether in their opinion the whole of the existing statutory provisions relating to the charges for the conveyance of merchandise traffic by rail should be repealed; or

(b) Whether, while retaining the broad outline of the existing position, certain provisions should be repealed or modified;

(c) In either case, what (if any) safeguards would be desirable for the protection of other interests.

"In the hope that it may assist the council in their consideration of these three points, the Minister has indicated on the attached document (Annex 'C') the main features of the existing statutory provisions relating to charges which, on a preliminary study, would appear to be affected by the railway companies' proposals."

### The Rates Position Summarised

Accompanying the letter above quoted was the following statement of some of the principal features in the existing statutory regulations for the conveyance of freight traffic that would appear to be affected by the railway companies' proposals:—

"From a preliminary study of the memoranda presented by the main-line railway companies it would seem that the

main features of the existing statutory provisions relating to charges for the conveyance of merchandise by rail which would be affected by the railway companies' proposals would include those set out below; but this list is not claimed, or intended, to be an exhaustive statement of the matters which may be affected.

(1) The obligation upon the Railway Rates Tribunal so to adjust charges as to ensure that the net revenue of each company is equal to its standard revenue, together with allowances for additional capital raised or provided in respect of further capital expenditure. (Railways Act 1921, Section 59 and first proviso to Section 35.)

(2) The imposition of maximum charges for the carriage of all commodities resulting from the obligation to charge no more than the standard charges, based upon a classification of merchandise and the schedules of standard charges, which can be varied only by the tribunal. (Railways Act 1921, Sections 28(1)(a), 29, 31, 32 and 35.)

(3) The limitations on the making of charges other than standard charges:—

(a) The obligation to charge no less than the standard charges except so far as authorised by Statute to do so. (Railways Act 1921, Section 32.)

(b) The obligation to obtain the prior sanction of the tribunal to the granting of new, or the reduction of existing, exceptional rates so as to be more than 40 per cent. below the standard rates chargeable. (Railways Act 1921, Sections 37(1) and 38(2) as amended by the Road and Rail Traffic Act, 1933, Section 40.)

(c) The obligation to report to the Minister of Transport all new, and reductions in existing, exceptional rates; and the power of the Minister to refer to the tribunal in certain circumstances. (Railways Act 1921, Sections 37(1) and (2), 38(2).)

(d) The obligation to lodge particulars of agreed charges, to give notice of applications for approval, and to obtain the prior approval of the tribunal before making the charges; and the provisions governing approval. (Road and Rail Traffic Act 1933, Section 37.)

(4) The protection afforded to canal interests (Railways Act 1921, Section 39) and coastwise shipping interests (Road and Rail Traffic Act 1933, Section 39).

(5) The limitations upon the power of the companies to increase or cancel exceptional rates. (Railways Act 1921, Sections 36 and 38(3) and (4) as amended by Road and Rail Traffic Act 1933, Section 40.)

(6) The power in the tribunal on the application of traders to fix new, or reduce existing, exceptional rates (Railways Act 1921, Sections 37(3) and 38(6)), or to fix a charge for the carriage of the merchandise of a trader whose business is detrimentally affected by an agreed charge made to another trader (Road and Rail Traffic Act, 1933, Section 37(6)).

(7) The obligation with respect to through rates (Railway and Canal Traffic Act 1854, Section 2; Railway and Canal Traffic Act 1888, Section 25; Railways Act 1921, Sections 28(1) (b) and 47).

(8) The jurisdiction of the tribunal to determine differences as to other charges (*e.g.*, Railways Act 1921, Sections 28, 49 and 55).

(9) The application of standard terms and conditions of carriage, which can be amended only by the tribunal (Railways Act 1921, Sections 42 and 45).

(10) The obligation to charge equally under like circumstances (Railway Clauses Consolidation Act 1845, Section 90), and to refrain from giving undue preference (Railway and Canal Traffic Act 1854, Section 2; Railway and Canal Traffic Act 1888, Sections 27, 28 and 30); the jurisdiction of the Railway and Canal Commission in connection therewith (Regulation of Railways Act 1873, Section 6; Railway and

Canal Traffic Act 1888, Sections 8 and 9; Road and Rail Traffic Act 1933, Section 37(9) and (10)).

(11) The obligation (a) to publish the classification of merchandise, schedules of standard charges, and exceptional rates (Railways Act 1921, Section 54); and (b) to publish particulars of agreed charges. (Road and Rail Traffic Act 1933, Section 37(11))."

#### Canals Appeal for Hearing

After the Minister of Transport had met the two deputations from the railway companies, he received a letter from the Canal Joint Commission appealing to him to hear the views of the canals before coming to any decision on the proposals of the railway companies that they should be relieved from their obligations in regard to services

and rates. The Canal Joint Commission represents the Canal Association, and the National Association of Canal Carriers. The letter suggested that it would be unwise to take any steps undermining the existing rates structure in what was an abnormal period of generally low traffics caused by the international situation.

Mr. E. J. Woolley, Chairman of the Grand Union Canal Company, in a statement made on December 13, said he was surprised that the railways had submitted their proposals to the Minister of Transport without informing the canal companies of their intention to do so. In the view of his company, a common rates structure for all forms of transport would go a long way towards the solution of difficulties.

## Mr. J. M. Eddy on the Argentine Railway Situation

(From Our Buenos Aires Correspondent)

Mr. J. M. Eddy, who has been in Buenos Aires for nine months, endeavouring, amongst other things, to find a solution of the problems affecting the British-owned railways in the Argentine Republic, and acting as their intermediary with the authorities of that country, gave an interview to *The Buenos Aires Herald* just before sailing for England on December 2; the following are some of the statements he is reported to have made:—

The Argentine Government is well aware of the situation of the railways, and the President has stated in an interview that he is prepared to deal with it. I am confident that it will not be long before a plan for dealing with the problem is found. Recently, there have been several occurrences of major importance to the railways. Of greatest significance was the Government's Decree altering the official exchange rate from \$16 to \$17 to the pound sterling, at the same time making prior permits necessary for all imports. These measures should, in the coming year, react favourably on the position of Argentina's international balance of trade, and leave the country in a more favourable position at the close of the coming financial year. To ensure this, however, it will be necessary for the wheat and other cereal crops to find foreign markets. The fact that the Government has fixed minimum prices ensures prosperity within the country. The marketing of the crops is, however, essential, and they will have to be sold at world prices, which will make the Government's liability heavy. Exchange differences have provided the Government with money for this purpose, there being some \$120,000,000 available. Argentina has never hoarded her crops, and there is no reason to expect that she will do so now.

During my stay I have been in constant contact with the members of the Government, and I can assure you that the importance of solving the problem of railway transport, so as to put the industry on a basis which will enable it to develop and afford efficient service, is very much in mind. This is indicated by the welcome promise to continue to give the railways an official exchange rate of \$16 to the pound.

#### The President's Message

The message given to me by H.E. the President, a few days ago, clearly states what the present position is. His Excellency stated to me that the

Argentine Government is well aware of the actual situation of the railways, and is prepared to deal with it; but as the problem must be examined from every aspect, very careful study is naturally required. In accordance with what His Excellency has expressed on several occasions, he is ready to consider a solution which would include transport as a whole, to effect which the companies will have to reorganise their financial and technical system, in order to adapt themselves to actual conditions. The Government's plans would include possible assistance from the State, in case this should be necessary; in which case, arrangements for an adequate control would be contemplated.

I am returning to London to consult my colleagues there, and am confident that it will not be long before a plan for dealing with this problem will be found.

It will be noticed that Mr. Eddy leaves Buenos Aires with much good will and many promises; but the actual remedy for the ills which beset the railways and the misfortunes of their shareholders have no time limit for their solution, so that it is not wise to indulge in any exaggerated optimism. In his interview, Mr. Eddy stressed the point that it was necessary for the Argentine public to realise that its own prosperity was intimately bound up with that of the railway companies engaged in the transport of the crops; but the Argentine Government and its good intentions are possibly hampered by the fact that the local man-in-the-street—especially if he is connected with one of the opposition parties—is taught to believe that the railways are concealing their gains, and that any concessions made to them by the party in power are simply sops to the capitalists.

## The India Store Department in 1937-38

The annual report of the India Store Department, London, for the year ended March 31, 1938, issued by the office of the High Commissioner for India in London, contains an interesting list of works carried out by the consulting engineers to the department—Messrs. Rendel, Palmer & Tritton—for the benefit of Indian and Burma railways. This list includes the following:—

Reports on the design in high tensile steel of standard plate girder spans, 60, 80, and 100 ft. in length, and on fabrication and erection for pre-stressing spans.

Reports on the stresses in the great cantilever spans of the Lansdowne (Sukkur) bridge over the Indus, N.W.R.

Report on the existing Sittang bridge, Burma railways, and alternative proposals (a) to lengthen it, or (b) replace it by a new bridge.

Estimates were prepared of the weights of 350- and 400-ft. railway spans only, and of 450- and 525-ft. rail-cum-road spans, for the proposed bridge over the Brahmaputra River, E.B.R.

At the request of the Chief Controller of Standardisation, Railway Board, a report was prepared on the possible suppliers of materials for light-weight rolling stock.

Some 1,200 drawings of carriage and wagon details received from the Central

Standards Office were scrutinised and corrected.

Considerable progress was made in the designing of five new broad-gauge types of locomotive.

Preparation of specifications for diesel railcars for Burma Railways.

Investigations regarding relative merits of rectangular and fluted coupling rods.

Rolling stock inspected during the year included 12 steam locomotives, 55 boilers, and 2 diesel railcars.

A 120-ton locomotive hoist was inspected for the G.I.P.R.

Investigation regarding patent rights in India for the Brogden rail joint were carried out.

The Director-General expresses his great regret at the death of Sir Seymour Tritton in November last.

Quite another branch of activity in which the department is engaged is in assisting to find opportunities for the practical training of Indian students. The number of applications from students was 159, as against 102 in the previous year, and in only 13 cases was it impossible to find suitable facilities, despite the preoccupation of firms with rearmament and other handicaps. The Skoda works in Czechoslovakia have agreed to take Indian students and pay them small stipends during their training.



## Acceleration of Train Services

Mr. S. H. Fisher's paper to the Institute of Transport

In reading his paper entitled "Acceleration of Train Services" before the Institute of Transport on Monday evening last, Mr. S. H. Fisher, Assistant Chief Operating Manager, L.M.S.R., gave some interesting details of the progress of acceleration on that railway during recent years. As late as 1931 the L.M.S.R. had no runs timed as fast as 60 m.p.h. from start to stop; by 1932 the first three such runs had appeared, with a total length of 418 miles, and by 1938 the remarkable total of 63 runs at this speed, an aggregate mileage of 6,317, had been reached. That the acceleration had been general was shown by the fact that these mile-a-minute journeys formed only 1½ per cent. of the total L.M.S.R. acceleration during the past five years, 28½ per cent. being of express and semi-fast trains not attaining to the 60 m.p.h. standard, and 70 per cent. that of local trains. Out of a total acceleration of 340 min. in the case of 55 L.M.S.R. expresses accelerated since 1934 to speeds of 60 m.p.h. and over, 78 per cent. was attributable to reduced point-to-point times with reduced loads, 8 per cent. to reduced running times with no reduction of load, and the remaining 14 per cent. to the elimination of intermediate stops. Prior to the accelerations last referred to, there were three categories of loading—full load, limited load, and special limit load—to which trains were restricted relatively to their scheduled speed with a suitable variation for each class of locomotive, and above these limits piloting was permissible; since these accelerations, two further categories, known as "XL limit" have been added. As an illustration of the loadings now laid down, a Class "6" 4-6-0 locomotive of the "Royal Scot" type is required to take up to 550 tare tons ("full load") over the 158 miles between Euston and Crewe in times down to 186 min.; 495 tons ("limited load") in 176 min.; and 475 tons ("special limit") in 170 min.; then follow "XL" limits, with speeds exceeding 60 m.p.h., of 415 tare tons in a minimum time of 155 min., and 360 tons in 148 min., the latter representing a speed of 64.1 m.p.h.

Justification for the running of high-speed trains was found by the author in the public desire for and patronage of fast travel, as is evidenced by the loading of the faster trains. It should therefore be the aim of the railways to increase their speeds to the maximum possible within the existing limitations, while at the same time maintaining punctuality, and preserving and developing those special features of comfort and spaciousness which give the railway a lead over its competitors. Credit was given to the per-

manent way engineers for the improvements that have permitted numerous previous speed restrictions to be relaxed. It was pointed out that whereas in earlier years speed restrictions were imposed only on specific curves, the considerable increases in maximum speeds due to the accelerations have made it desirable to impose a general limit of 90 m.p.h.

The author laid stress on the fact that acceleration had been achieved not merely without sacrifice of safety, but that, with new developments of braking and signalling, safety tended to increase. As regards control, efforts were being made to improve the vacuum brake by means of the direct admission valve, which accelerates both service and emergency brake applications by the admission of air direct to the cylinders on each coach instead of through the engine valve only. The moving out of distant signals to afford greater braking distance, though with due regard to the slower-moving traffic, which might lose more time than otherwise, when the line is not clear, owing to unduly early brake applications. There had also been widespread substitution of colour-light for semaphore signals, not exclusively in the interests but much to the advantage of the high-speed trains, owing to the clearer signal indications so given. The only general application to date of automatic train control in this country, however, had been that of the G.W.R., though the L.M.S. and L.N.E. companies were both experimenting with such equipment.

The paper made little reference to motive power, suggesting that locomotives of the necessary power were available well in advance of the demands made by acceleration programmes; but the author claimed that constant increases in train weights, such as those recently made by the introduction of armrests into third class compartments, now by the addition of forced ventilation, and in the future by further possible amenities, will inevitably call for increased locomotive power unless the mechanical engineers can devise means for reducing the weight of the vehicles themselves. Otherwise high speeds can be scheduled only with trains of limited accommodation. Running costs increase with speed, for of two trains of equal weight the haulage of one at a higher speed must, other things being equal, mean increased coal consumption and wear and tear. Obtaining headway for high-speed trains reduces line capacity, as also do special signalling precautions, and for this reason the author favoured raising the general level of speed rather than the introduction of ultra-high-speed services. Further, he was opposed to special supplements levied on passengers for the use of trains of this description.

As regards motive power in its relation to acceleration, the author con-

tended that until now electricity had not shown any greater suitability than steam for the working of long-distance high-speed services, whatever its merits in operating high frequency short-distance services. Diesel power, on the other hand, had justified itself as a suitable motive power for high-speed trains. In view of the national importance of coal to this country, however, it would not be advisable to turn to diesel power—unless fuel oil could be obtained economically from British coal—until all resources for improving steam and electric traction, the former in particular, had been fully exploited.

In conclusion, considerations bearing on freight train speeds were discussed by the author. With the four-wheeled freight stock standard in Great Britain, maximum speeds in excess of 60 m.p.h. were undesirable on safety grounds, and six-wheel or bogie wagons would be necessary to permit any increase in this speed, which in turn would raise new problems in the matter of clearances in private sidings, the use of wagon turn tables and hoists, and curvature of siding tracks. The general application of continuous brakes to wagon stock was doubly complicated by the expense involved, and by the difficulty of the private owners' wagons, and the magnitude of the problem was measured by the fact that there were roughly as many private owners' as railway-owned wagons in this country.

Again, the great majority of private owners' wagons were still fitted with grease axleboxes, whereas all but 8 per cent. of the railway-owned wagon stock now had oil axleboxes, which permitted higher running speed without fear of heating. As regards automatic couplings, not only was the expense of fitting a serious consideration, but also the matter of marshalling, which would entail a remodelling of many shunting yards and a complete revision of methods.

It would seem from these considerations that general acceleration of freight traffic in this country could best be attained by reducing the length and weight of freight trains; although the number of trains in service would thus be increased, their higher speeds would reduce line occupation, and this in its turn would facilitate the further acceleration of passenger services.

Mr. Gilbert S. Szlumper, President, proposed a vote of thanks to Mr. Fisher, and called on Mr. V. M. Barrington-Ward to open the discussion.

Mr. Barrington-Ward referred to the difficulty, when ordinary express trains were running late immediately in advance of high-speed trains, of deciding whether or not the former should be side-tracked to allow the high-speed train to pass, so making the ordinary express later still. The paths required by high-speed trains also tended to widen, with delay to other traffic, owing to the reluctance of signalmen to let freight trains out on to main

lines with what they thought might be insufficient margins. He considered that the speeding up of low-grade freight trains was the first essential in any general acceleration programme, and strongly favoured lighter and easily handled freight trains rather than fewer trains of greater weight.

Mr. W. J. England, in view of the extreme congestion with suburban traffic of all the Southern main lines out of London, was in favour of general acceleration rather than special high-speed services, and commended electrification as a valuable aid in any acceleration programme, owing to the quick get-away of electric trains and their contempt for the up gradients that considerably slowed down the speeds of steam locomotives.

Mr. C. E. R. Sherrington drew attention to the fact that notwithstanding the great progress made in Great Britain, and particularly by the L.M.S.R., in accelerating express passenger trains to a mile-a-minute standard, greater progress had been made abroad; in the United States, for example, the mileage of runs timed at 60 m.p.h. and over was four times the corresponding mileage in Great Britain. He asked what was being done in the matter of roller bearings for high speed stock, and also, in view of the author's reference to streamlining, and the recently published German figures as to a 15 per cent. saving in fuel costs on high-speed trains by its aid, what the L.M.S.R. was doing in this direction. In regard to general acceleration, was the L.M.S.R. considering the introduction of four-aspect signalling on main lines with a view to reducing margins between trains?

Mr. Cecil J. Allen drew attention to pioneering of the G.W.R. in having first set the standard, some thirty years ago, of mile-a-minute travel in Great Britain, even though other companies may since have even surpassed the G.W.R. achievements. The introduction of ultra high speed travel probably dated back more than to any other first cause, to the introduction by the Germans of the Flying Hamburger in 1933, and so rapid has been the march of railway acceleration since then that, whereas when the G.W.R. Cheltenham Flyer, with its 71.4 m.p.h. run from Swindon to Paddington, was the fastest run in the world on its establishment in 1933, it now took the eighth place with steam, and the eightieth place with all modes of propulsion. Mr. Allen pressed for an official policy in recovering lost time, on the lines of what is done on the Continent and in America. In regard to passenger comfort, he considered that the Hallade recorder or some similar device might be adapted to measure the relative merits of different types of coach suspension, and in particular to decide whether ordinary or articulated stock provided the smoother riding on high-speed services.

Mr. R. Carpmal remarked that the accelerations of recent years had taught engineers the importance of proper

alignment and proper packing of track, commending in this connection the measured shovel packing recently introduced, and the classes in which permanent way men were now being instructed in the technique of their work. It was the custom of his department as far as possible to programme its work, in the interests of punctual traffic operation, as had been suggested by one of the speakers.

Mr. W. A. Willox supported the contention of the paper and of various speakers for general acceleration, including particularly local and cross-country services, as meeting the major public need. Where very high-speed trains were introduced, they should be to meet a definite need, as, for example, the German diesel-electric services, which enabled persons from all the principal cities of Germany to reach Berlin by midday, gave then until the early evening in the capital, and then got them back home by midnight, even though the cities concerned were from 300 to 400 miles apart. On suitable stretches of track these high-speed units travelled with perfect smoothness at speeds up to and slightly exceeding 100 m.p.h. Too much stress could not be laid on the matter of punctuality, and he regarded the timetable as a form

of contract between the railway and the passenger. Also he thought that more might be done by locomotive departments, on the lines of the successful and inexpensive front-end modifications developed in France to enable existing locomotives to meet acceleration demands.

Mr. Fisher, in his reply, agreed that general acceleration of train services was the answer to many of the points that had been raised, such as margins between freight trains and expresses, and that one common level of speed, as far as practicable, gave better prospects of punctuality than an increase in the number of high-speed trains. As regards the recovery of lost time, his contention was that this practice could not receive full and definite official encouragement until all locomotives engaged on express passenger service had been fitted with speedometers; this was now being done as rapidly as possible on the L.M.S.R. His company believed in maintaining close contact between the operating and the civil and mechanical engineering departments, and by committees and in other ways interworking in the interests of efficient operation was developed in the maximum degree possible.

(See editorial on page 1035)

## The Capital of British Railways

Mr. G. Morton, Chief Accountant of the L.M.S.R., read a paper to the Harrow Rotary Club on December 9 on "The Capital of the British Main-Line Railways." The capital of the four main lines, he said, stood at the end of last year at the huge figure of £1,093,000,000, and the capital expenditure was £1,166,000,000, or £73,000,000 more than the capital receipts. Capital expenditure, he stated, represented the *original* cost of such items as land, buildings, rolling stock, and so on. While exorbitant prices were often charged for land in the early days of railway building, there was now railway property in towns that was worth much more than the price paid for it. It can be calculated that the average cost per route-mile for land has been £42,000, but it was certain that a railway could not be provided for such a sum today. In that respect, therefore, the railways were under-capitalised rather than over-capitalised.

Some critics maintained that railway capital should be written down because only small dividends were being paid today. In 1937 the railway net revenue available for stock and shareholders was £38,000,000, and the average yield approximately 3½ per cent. all over, with a much lower return on the ordinary stocks taken by themselves. The net revenue for 1938 was likely to be several millions lower, and many more millions below the standard revenue of £51,000,000. So strong was the desire of Parliament

to ensure a reasonable return on railway capital that it was legislated that, should the standard revenue be exceeded, 80 per cent. of such excess was to be given up to the users of railways by way of reduced charges. With such a charter, and considering that they were better equipped and more full of fight than at any time in their history, it could not be said that the case for writing down capital had any justification. A sum of over £300,000,000 had been spent since the 1923 amalgamations on renewals and reconstruction of rolling stock, track, and buildings.

It was a matter of concern to all taxpayers that since the war the railway capital was being duplicated by the huge national expenditure on the roads of the country, although the total transport requirements were probably no greater now than before the war. It must seem strange to many right-minded people that although the railways had had to see an alternative freight system fostered by the provision of wide new roads, capable of carrying heavy weights (yet without the excessive "safety" regulations which the railways must obey), those railways must still observe onerous laws as to their charges, to say nothing of their obligations as common carriers.

Mr. Morton considered the amount of capital at stake to be so stupendous a figure that the future of the railways (including their stockholders and employees) was one of the most important questions of our time.

## Northern Ireland Transport

### Northern Ireland Parliament debate on M'Lintock Report

The following motion, standing in the names of the Prime Minister and the Ministers of Finance, Home Affairs, and Labour, was moved by the Prime Minister in the Northern Ireland Parliament on December 8:—

That in the opinion of this House, the Government should immediately devise measures to deal with the evasions of the provisions of the Road and Railway Transport Act, 1935, and to assist to secure the improvement of the provisions of the existing Acts relating to hours and conditions of wages in the transport industry; and that the Government do further take into consideration the matters dealt with in the reports of the Recorder of Belfast and Sir William M'Lintock's Committee, with the object of securing that such arrangements will be made for transport as will be in the best interests of the people of Northern Ireland.

The Prime Minister said that during the last 20 years the transport problem, not only in Ulster but throughout the world, had gradually become more and more acute. If in Northern Ireland they had been a little premature in their attempted solution, they had learned a lesson. Speaking of the complicated question of compensation, the Premier said that as there was no precedent the payments had been most ample and full justice had been done. There was pressure from every one for cheaper fares and better service and the board had conscientiously tried to help the public, and especially the farmers.

"Blame is attached in the M'Lintock report to practically all those who had anything to do with the original Act and with its carrying out," the Prime Minister proceeded. The Government, he said, was prepared to take the full responsibility, in the knowledge that all had done their best in critical circumstances. They now found themselves face to face with a crisis, and in telling the House the steps they proposed to take he hoped to gain unanimous acceptance of the plan. The Act had failed to secure co-ordination and that was principally due to the fact that they had attempted dual control and this had failed. It was necessary to evolve a scheme whereby dual control could be dispensed with and to have single control and single power. The Government proposed to introduce a Bill dealing with two matters which would be of great importance under whichever scheme was carried out. The first was to prevent the illegalities which at present are widespread, and the second was to deal with the wages paid outside the Transport Board.

#### A Select Committee

The Premier said he proposed that a comprehensive committee of all parties of the House and of the Senate should be set up to go into the whole matter and then report to the Government. The Government would en-

deavour to include, wholly or in part, the committee's report in the new Transport Bill. Emphasising the necessity for co-ordination the Premier said that the measure would be to all intents and purposes the people's own Bill. Their views as far as possible would be embodied in the measure which was intended to be entirely for their benefit. He also appealed to the Opposition to assist. It was no use passing Acts of Parliament unless the people themselves were satisfied that it was the best that could be done. He knew that would be a difficult task, but local authorities, chambers of commerce and chambers of trade, and everybody who could help, could be consulted.

Mr. J. Beattie (Lab.), Leader of the Opposition, said he could not turn down the suggestion made by the Prime Minister for the setting up of a select committee and he hoped all concerned would put practical propositions before the committee. In his opinion national ownership of road and rail transport was essential, and if the Select Committee realised its responsibility to the public it would come in with a fully-fledged Bill for the complete control of road and rail.

#### In Defence of the Railways

The Minister of Home Affairs (Sir Dawson Bates) reviewed conditions prevailing before the introduction of the Act. In the Act, he said, it was not possible for the Government at the time to go as far as they would like to have gone. The 1935 Act, however unsound it might have been in detail, was sound in principle throughout. In order to unite rail and road interests, Sir Dawson Bates said, a common interest must be provided. In the 1935 Act the common interest was the pooling interest, but it had not worked well and some other method would be tried. As regards the losses that had been incurred in this experiment, surely it would have been very optimistic to expect it to pay its way from the start. Sir Dawson Bates said that the number of people employed on the railways in Northern Ireland was 5,550 and the amount of the salaries paid was £840,000. During last year 16,000,000 passengers were carried on the railways of Northern Ireland. Employees of the board numbered 2,989, and it carried 586 tons of goods.

Mr. Thomas Henderson (Independent Unionist) attacked the Minister of Home Affairs for his efforts at the time of the introduction of the Bill, and advocated a return to private enterprise.

At question time the Minister of Home Affairs said the total expenses in connection with the two transport inquiries would, it was estimated, amount approximately to £7,000. The

fees payable to the members of the committee were as follows:—His Honour the Recorder, 250 guineas; Sir William M'Lintock, 1,000 guineas; Sir Herbert Walker, 750 guineas; Mr. J. S. Nicholl, 750 guineas. Miscellaneous expenses in connection with the inquiry conducted by His Honour the Recorder amounted to £417. Those in connection with the M'Lintock Inquiry had not yet been finally settled, but would, it was estimated, amount approximately to £3,800. The gross cost of printing the combined reports amount to £90, but the receipts from sales had already reached £95.

It is understood that Mr. J. C. MacDermott, K.C., M.P., will be the Chairman of the new Parliamentary Committee to examine the reports of the M'Lintock Committee and the Recorder of Belfast, and to formulate proposals for the new Transport Bill.

At a meeting of the Executive of the G.N.R.(I.) Shareholders' Protection Association, held in Belfast, the M'Lintock Report was discussed and grave concern was expressed at its findings. It was proposed that the directors should be approached.

#### Motor Agents' Resolution

The Ulster Division of the Motor Agents' Association has passed the following resolution regarding the M'Lintock report.

The members view with grave concern the possibility of the Government experimenting further in road transport matters. The Division is firmly of opinion that the Road and Rail Transport Act should be repealed forthwith and that there should be no further restrictions on the natural and economical development of goods transport in Northern Ireland; and they desire to emphasise that the chaotic conditions existing in road transport today are entirely due to the Government introducing legislation against the preponderance of opinion of trade and business organisations.

A special committee was formed to co-operate with other bodies, if necessary, in the future.

#### The Emergency Bill

The Emergency Road Transport Bill was presented in the Northern House of Commons by the Minister of Home Affairs, and was formally read a first time on Tuesday, December 13.

The title of the measure has been amended to widen the scope of the Bill. In its amended form the object of the Bill is:—

To provide for the establishment of a register of vehicles licensed for the transport of goods on roads; to amend certain provisions of the Road and Railway Transport Act (Northern Ireland), 1935, and to enable the Ministry of Finance to borrow money for the purposes of section twenty-one of the said Act; to provide for the regulation of the wages and conditions of employment of persons employed in connection with the transport of goods on roads; and for purposes connected with the matters afore-said.

The M'Lintock report was summarised in THE RAILWAY GAZETTE of December 2, pages 947, and 971.



## Inquiry into the Railway Position in Eire

The financial position of the Railways in Ireland generally has been the subject of acute worry to the management, the shareholders, and to the Government. The main reasons for the present unsatisfactory position are: competition of licensed hauliers, competition by irregular hauliers evading the Acts, the use by private firms and businesses of their own lorries, and the rising costs of labour and materials.

These facts have been so apparent that the railway question has been the subject of resolutions by councils and committees all over the country, and the agitation for Government assistance has at last tended to become effective.

On December 7 the Parliament of Eire approved the establishment of a Tribunal, with High Court powers, to inquire into the following matters:—

The present position of public transport, The circumstances which have caused the present unfavourable financial position of the railways,

The measures necessary to secure efficient and progressive public transport, and

Whether any further legislation or changes in the ownership, or methods of administration of existing transport undertakings are necessary.

The Minister for Industry and Commerce, in introducing the motion, said that he had received from the railways in Eire representations that they had reached a position of acute financial stringency and claimed Government action for their assistance. The Great Southern Railways stated that the estimated net income of the entire undertaking, including road transport, for this year, would fall short of the amount required to pay the interest on the debenture stock, by a very substantial amount. Similar information was received from the Great Northern Company. The liquid assets of both companies were exhausted, and the position precarious. In respect of cash resources for day-to-day working fresh capital was urgent.

The Great Southern Company required a substantial sum to meet expenditure, including the closing down of uneconomic sections of the line and substituting and developing road transport. It was clear that the company could not hope to raise, in the ordinary way, any new capital at the present time without Government assistance or guarantee. Consequently the Government was satisfied that major decisions on transport policy must now be taken and that it was causing the tribunal to be set up. The Minister was yet unable to give any indication of the personnel of the tribunal, but did not think it should be undertaken by transport experts.

Mr. Davin, a prominent Labour Deputy, stated that Mr. Lemass, in 1931, had urged that the railways were essential to the industry of the country and that public ownership was desirable, if not essential. Mr. Davin understood that the company wanted the Government to advance it a con-

siderable sum of money to carry out improvements to the permanent way and rolling stock, and to buy out all existing services on the road; it had also asked the Minister to consent to the closing down of 41 sections or branch lines. Mr. Davin stated he would oppose, by all the force possible, any decision to close down branch lines until the road transport of the country had been regulated so as to prove that there was no necessity to operate these branch lines. Another deputy asked if the Minister intended giving a monopoly of the transport of the country to the railway company.

Replying to criticisms, the Minister stated that the total tonnage of merchandise carried by the Great Southern Railways was 8 or 10 per cent. higher than in the first year of its existence, but the amount received was not sufficient to pay expenses. He stated that the 1933 Transport Act set out to give

the railway company a monopoly. It was 90 per cent. effective, and as far as passenger traffic was concerned it was 100 per cent. effective. Some people had certainly been successful in evading the law, but the legislation had been no more ineffective than in other countries. The most dangerous form of competition was the private lorry and competition from this source would have to be regulated. He did not agree that a more efficient service could be carried on by the roads, but he considered that the main lines were the only ones that could be preserved. He criticised the Great Southern and the Great Northern Railway Companies in regard to their efforts to take advantage of the 1933 legislation. The circumstances of this year might be purely temporary, and they might be agitating themselves unduly. This year the working expenses were not being earned, and unless something were done the operation of the companies must cease. Mr. Lemass spoke in both the Dail and the Senate.

## Danish Transport Co-ordination

The Danish Government appointed a traffic commission in December, 1936, to make proposals for the co-ordination of road and rail traffic and investigate all relevant questions. It is expected that the report of the commission will be ready before the end of the year, but meanwhile in a speech some days ago, the Chairman, Herr N. P. Nielsen, made a survey of the commission's work. As the commission has representatives from all groups interested, a unanimous report is unlikely, but it will be framed to represent the recommendations of the majority of its members and this is likely to be accepted by the Rigsdag. There seems to be no difficulty in the relations between railways and buses, as the railways have acquired practically all competing bus routes.

In goods traffic, however, competition is at present very severe, as the lorries are run at excessive speeds and overloaded, and the drivers are overworked. It is now proposed that a standing traffic committee shall be appointed in every county, in which the county, municipal, and rural councils will play an important part, but the Minister of Transport, the railways, the road hauliers, and the workers' organisations will also have representatives thereon. These committees are to issue licences, and if a clear majority for giving a licence is not obtained, the case shall be put before the Minister of Transport.

Further rules are recommended with regard to regulation of the drivers' wages, working hours, and resting time. All road hauliers will be on a new register, held by the police, and if the above rules and regulations are not observed, the licence will be withdrawn and the road haulier removed from the register.

The commission proposes that the private railways be divided into four groups, namely:—

1. Railways which are expected to be able to carry on without financial support;
2. Railways which are likely to develop in general importance, but need financial support;
3. Railways which for a number of years to come are likely to be purely local in character and which need financial support; and
4. Railways which are in such a position that the commission cannot recommend financial support.

By this division the commission has taken into consideration the traffic on each railway during recent years in comparison with the total traffic in the district, the economical results of the working, the technical state of the line, and so forth.

The commission will recommend that financial support be given in the form of loans for modernisation, moratorium for earlier modernisation loans, and will give more favourable terms to undertakings serving as feeders to State Railway stations. Practically all private railways start from a State Railway station, and the State Railway staffs at such junctions act as agents for the private railways, but nowadays the State Railways receive inadequate payment for these services. Further, it is proposed that a condition for a loan shall be that the local rural councils guarantee the continuance of the working of the railway and are willing to cover possible deficits. The county standing committee may also hand over to the railway all those bus and lorry routes which are competing with the railway.

If a railway is not able to carry on, all members of the staff, if under 55 years of age, will be taken over by the State Railways.

## RAILWAY AND OTHER MEETINGS

### Madras & Southern Mahratta Railway Co. Ltd.

The annual general meeting of the Madras & Southern Mahratta Railway Co. Ltd. was held at 123, Victoria Street, Westminster, S.W.1, on December 14, Brig.-General Sir Charles L. Magniac, C.M.G., C.B.E., late R.E., Chairman of the company, presiding.

The Secretary (Mr. Vaughan Craster, O.B.E.) read the notice convening the meeting and the auditors' report.

The Chairman, in moving the adoption of the report and accounts, said that the capital expenditure during last year was Rs. 32.16 lakhs, but the normal expenditure was represented by only Rs. 2.45 lakhs on rolling stock and Rs. 0.76 lakhs on collieries, reduced by credits under certain other sub-heads. The largest item was the sum of Rs. 30.46 lakhs, owing to the purchase by the Government of the Bezwada-Masulipatam Railway from February 4, 1938. Formerly this line, about 52 miles in length, was worked by the company for the Kistna District Board, but from the above date it became part of the company's and State lines. This branch had averaged a return of about 20 per cent. on the capital during the past five years, whilst the company had been working it at a figure of 45 per cent. only of the gross earnings; the result was that it would be a distinct advantage to have it merged in the system. The metre gauge lines belonging to the Mysore State, namely, Bangalore to Harihar, and Yesvantpur to the Mysore frontier, were transferred to the Mysore Government on the expiry of the old contract, that is, with effect from January 1, 1938.

There was a slight improvement under gross earnings, the total for the entire system being Rs. 749.33 lakhs, or about Rs. 2 lakhs more than in the previous year. The whole of this increase was attributable to coaching earnings, which were actually up by Rs. 5.30 lakhs over last year, but a reduction of some Rs. 4 lakhs in goods receipts brought the total figure down to Rs. 749.33 lakhs. The extra coaching receipts reflected the results of efforts which had been made to attract the public back to the railway by means of reduced fares and more convenient services. The administration was continuing its efforts to devise means for inducing increased travelling.

The new road traffic legislation of the Madras and Central Government would, it was hoped, put the vexed question of rail *versus* road on a more satisfactory basis, so far as unrestricted running of buses and lorries was concerned. Local authorities were now realising that in cases where the railway offered adequate facilities for passenger travel and goods transit, it should receive some measure of protection against unfettered competition from road services. Shareholders would be interested to learn that the com-

pany's Agent and General Manager had formulated a scheme whereby their railway would participate in the running of buses or lorries in conjunction with a firm of motor transport agents in Madras. In the first instance these might be mainly in the nature of feeders to the railway, but the scheme would be developed if it proved as successful as was anticipated.

Working expenses totalled Rs. 437.43 lakhs, some Rs. 12½ lakhs less than for 1936-37, and represented 58.4 per cent. of the gross earnings compared with 60.2 per cent. for the previous year. There were some increases under operating expenses and administration, but the most important fall was under replacement and renewal, which was nearly Rs. 31.00 lakhs less than that for 1936-37. This was accounted for by the fact that renewals of rolling stock and parts had not been heavy and, to this extent, the saving must be considered fortuitous. In future years they could not expect to realise such a low figure, nor would this be desirable, because further essential replacements chargeable to revenue would have to be provided. Among other items, the transfer of the working of the Mysore State Railway to the Mysore Government would increase the percentage figure of working expenses to gross earnings. Close attention was still being paid to economy, and their Agent and General Manager reported a saving of Rs. 85,000 during the year 1937-38, of which Rs. 33,000 was recurring.

The actual total net earnings for the whole system amounted to Rs. 311.9 lakhs against Rs. 297.51 lakhs for the previous year, which thus showed an increase of Rs. 14.39 lakhs. But, as had been previously mentioned, this was partly due to a reduction in working expenses. The total surplus profits received for the year were £110,017, compared with £146,241 in 1936-37, that is to say about £36,224 less.

In July last an interim dividend of 4½ per cent. was paid, and the directors recommended a final distribution on January 2 next of 3 per cent., making a total of 7½ per cent. for the year.

The audited results of working for the first half of the present financial year to September 30, 1938, showed an increase in gross earnings of about Rs. 20 lakhs, and an increase of about Rs. 11 lakhs in gross expenses, the net earnings being some Rs. 9 lakhs more than the first half of last year. The traffic returns up to date showed some improvement on those of 1937-38, and although there might be fluctuations before the close of the year, it was anticipated that the earnings would not vary appreciably from those of last year.

Major-General Sir Henry Freeland

recently proceeded on deputation to India on behalf of the Bombay, Baroda & Central India Railway Company, and the board had taken the opportunity of arranging for him to spend a short time on their own company's business at Madras to discuss certain important questions with their Agent and General Manager, Mr. C. G. W. Cordon.

Since their last meeting, Sir Charles B. Cunningham and Sir Maurice W. Braysay had joined the board, and the Chairman was sure that the company would benefit by their long and up-to-date experience of Indian administration.

The report and accounts were unanimously adopted.

### Forthcoming Meetings

- Dec. 19 (Mon.).—Pullman Car Co. Ltd., (Ordinary General), Conference Room, Victoria Station, S.W.1, at 3.30 p.m.  
Dec. 21 (Wed.).—Mexican Railway Co. Ltd. (Ordinary General), Winchester House, Old Broad Street, E.C., at 2.30 p.m.

### Forthcoming Events

- Dec. 16 (Fri.).—British Railway Stockholders Union, at Caxton Hall, Caxton Street, London, S.W.1, 11.30 a.m. Annual General Meeting.  
Institute of Transport (Manchester-Liverpool), at Queen's Hotel, Piccadilly, Manchester, 6.30 p.m. "Can Unnecessary Transport be Eliminated?" by Mr. W. McLaren Hamilton.  
Dec. 17 (Sat.).—L.N.E.R. Musical Society, at Queen's Hall, Langham Place, London, W.1, 8 p.m. Carol Concert.  
Stephenson Locomotive Society (Newcastle), at Y.M.C.A., 7 p.m. "The London Passenger Transport Board," by Mr. W. Fill.  
Dec. 19 (Mon.).—Engineers' German Circle, at Inst. of Electrical Engineers, Savoy Place, London, W.C.2, 6 p.m. "Gegenwartsfragen Der Fernsehtechnik (Current Problems in Television Technique)," by Herr Ministerialrat Gladenbeck.  
Dec. 20 (Tues.).—Institute of Transport (Leeds, Graduate), at City Transport Department 7 p.m. Discussion of Transport Problems.  
Institute of Transport (London), at Inst. of Electrical Engineers, Savoy Place, W.C.2, 6 p.m. "Some Aspects of Research in a Transport Undertaking," by Mr. D. Lemon.  
Dec. 21 (Wed.).—Permanent Way Institution (Scottish), at Royal Technical College, George Street, Glasgow, 7.15 p.m. "Fifty Years' Experience as a Permanent Way Inspector," by Mr. J. Mullans.  
Dec. 30 (Fri.).—Tramway and Light Railway Society, at Inst. of Marine Engineers, The Minories, London, E.C.3, 8 p.m. "A Brief Survey of the Tramways of Germany," by Mr. Charles E. Lee.  
Jan. 3 (Tues.).—Institute of Transport (Bristol), at Bristol Tramways and Carriage Company's Welfare Centre, 7 p.m. "The Electrification of Railways," by Mr. S. Smart.  
Institute of Transport (Metropolitan Graduate), at Inst. of Electrical Engineers, Savoy Place, W.C.2, 6 p.m. "The Organisation and Work of a Traffic Area Office," by Mr. J. Bottom.  
Jan. 5 (Thurs.).—Engineering Public Relations Committee, at Heriot-Watt College, Edinburgh, 3 p.m. Christmas Lecture for Young People. "Ships and their Engines," by Engr.-Captain E. Smith, O.B.E.  
Jan. 6 (Fri.).—Engineering Public Relations Committee, at Inst. of Electrical Engineers, Savoy Place, London, W.C.2, 3 p.m. Christmas Lecture for Young People. "Speed on Land and Sea and in the Air," by Capt. J. Irving.

## QUESTIONS IN PARLIAMENT

### Railways, Coastwise Shipping and Canals

Mr. J. Parker (Essex, Romford—Lab.), on December 8, asked the Minister of Transport whether he was aware that there was a voluntary agreement between the railway companies and coastwise line companies on the subject of rate control, and that an extension of this agreement to road-haulage and canal companies was recommended in the Report of the Transport Advisory Council presented in July this year; and whether he would take steps to accelerate the co-ordination of transport services and charges in order to provide the best solution to the railway problem.

Dr. Leslie Burgin (Minister of Transport): I am aware of the circumstances stated in the first part of the question. As regards the latter part, I would refer the hon. member to the reply which I gave to a somewhat similar question by him yesterday.

### Road Transport and Railways

Mr. R. De La Bere (Evesham—C.), on December 12, asked the Prime Minister whether he would find time for a discussion of the following motion standing in his name relating to road transport and railways:—

"That this House deplores the continued attacks made by railway companies upon the freedom and progress of road transport in this country and, having regard to the fact that over £25,000,000 was recently made available to the railways at low interest under State guarantee to assist them to put their affairs in better order, and that since then they have expended substantial capital sums in buying up road transport organisations, is of the opinion that steps should now be taken by His Majesty's Government to give better protection to road transport interests against the menace of the railway monopoly."

The Prime Minister (Mr. Neville Chamberlain): I cannot add to what I have already said to my hon. friend in reply to questions which he has addressed to me asking for time to discuss motions standing in his name.

Mr. De La Bere: Is my right hon. friend aware that there are many thousands of ex-service men engaged in road transport; and does he not think the House should have the opportunity of separating the true from the false and the real from the unreal, and give fair play for all, and a square deal?

The Prime Minister did not reply.

### Railway Companies' Proposals

Mr. Ben Smith (Bermondsey, Rotherhithe—Lab.), on December 14, asked the Minister of Transport (1) whether he was taking any steps to ascertain the views of the trade unions representing workers employed on the railways and in the road transport, inland waterway, and coastwise shipping services, regarding the proposals made

by the railway companies for the removal of statutory regulations; (2) whether he had considered the representations from the road transport interests on the subject of railway rates; what was the nature of the representations; and could he make a statement; and (3) whether he had considered representations from the coastwise shipping companies concerning the railway companies' proposals on rate-fixing; what was the nature of the representations; and could he make a statement.

Dr. Leslie Burgin: I have received a circular on this matter from the Coastal Trade Development Council. I have referred the railway companies' proposals to the Transport Advisory Council on which labour, coastwise shipping, and road transport interests are represented.

Mr. Creech Jones (Yorkshire—W. Riding, Shipley—Lab.), on December 14, asked the Minister of Transport whether he was aware that the four main-line railway companies submitted a memorandum to the Transport Advisory Council on September 7, 1936, in which they did not ask to be exempted from their obligations regarding rate-fixing, which they regarded as not inappropriate to a public service, and suggested that the acceptance of analogous obligations by road-hauliers would constitute a step essential to the building up of any stable and equitable system of co-ordination; and whether he would take steps to hasten the co-ordination of transport rather than introduce the legislation now demanded by the railway companies for the removal of the existing statutory requirements.

Dr. Leslie Burgin: I am aware of the memorandum referred to. The whole question of the co-ordination of transport is receiving my earnest consideration in the light of the Reports of the Transport Advisory Council on Service and Rates, and in referring the present proposals of the railway companies to that council for its very early consideration and advice I have informed it that I am inclined to the view that in existing circumstances there is *prima facie* a case for some material relaxation of existing statutory regulations, providing that due regard is had to the ultimate objective of the co-ordination of all forms of transport.

Mr. F. C. Watkins (Hackney Central—Lab.): May I ask the Minister if this reply means that there is a possibility, when he is giving consideration to the co-ordination aspect, that that might take precedence over the railway companies' present claims?

Dr. Burgin: I think the objective to be obtained is co-ordination of the forms of transport. That is one of the principal matters in view in the reference of the principal remedies suggested by the railway companies to the Transport Advisory Council.

Mr. Watkins: Does the Minister con-

sider it possible that he may advise that co-ordination might take precedence and render unnecessary the proposals of the railway companies?

Dr. Burgin: I am hardly in a position to say that yet.

Mr. W. M. Adamson (Stafford, Cannock—Lab.), on December 14, asked the Minister of Transport if he would indicate the results of his further consultations with the representatives of the railway companies with regard to the claims made by them for the withdrawal of legal restrictions on rates.

Mr. W. W. Wakefield (Wiltshire, Swindon—U.), asked the Minister of Transport what steps he proposed to take to remove the present statutory disabilities under which the railway companies were now suffering.

Dr. Burgin: I have referred the proposals of the railway companies to the Transport Advisory Council for very early consideration and advice.

### Coastwise Liner Companies & Railway Companies Agreement

Mr. James Hall (Stepney, Whitechapel—Lab.), on December 14, asked the Minister of Transport if he would indicate what classes of merchandise were covered by the schedule of rates agreed upon between the coastwise liner companies and the railway companies and what routes.

Dr. Leslie Burgin: The agreement between the coastwise liner shipping companies and the railway companies is a voluntary one and is understood to cover the carriage of goods in Classes 7 to 20 of the General Railway Classification of Merchandise and Livestock between the ports and other places in Great Britain where the interests of the two parties are common.

### Water-Borne and Railway Traffic

Mr. James Hall (Stepney, Whitechapel—Lab.), on December 14, asked the Minister of Transport whether he had any figures to show the extent to which coastwise shipping traffic had been diverted to the railways; and whether, in view of the statements in the memorandum presented by the Chamber of Shipping to the Traffic Advisory Council as to the methods adopted by the railway companies to divert traffic from the sea, he would indicate what steps he was taking to develop the coastwise shipping service, in view of the economic advantage of water-borne traffic in peace time and the vulnerability of the railways to attack from the air in time of war.

Dr. Leslie Burgin: As regards the first part of the question, I have no particulars to show whether and, if so, to what extent, traffic has been diverted from coastwise shipping to railways. The second part of the question is a matter for the President of the Board of Trade, but I may point out that coastwise shipping traffic, as measured by the official statistics of arrivals and departures of vessels with cargo in the coasting trade of Great Britain, has substantially increased recently.



## NOTES AND NEWS

**Eire Tourist Traffic Bill, 1938.**—As foreshadowed on page 859 in THE RAILWAY GAZETTE of November 18, the introduction of a Tourist Traffic Bill in the Dail is announced.

**New L.M.S.R. Station in Liverpool.**—A new L.M.S.R. passenger station at West Allerton, between Allerton and Mossley Hill stations in the Liverpool district, will be opened for traffic on Monday, January 2.

**Manchester Road Goods Yard, Bradford.**—The L.N.E.R. is to install a new cart weighbridge in the goods yard at Manchester Road, Bradford. The present weighbridge is restricted to loads not exceeding 5 tons, but, when the new weighbridge is in operation, it will be capable of weighing vehicles up to 20 tons in weight.

**New Quebec Railway.**—On the new branch line from Senneterre to Val d'Or and Noranda, serving the rapidly-developing mining area of North-western Quebec, the Canadian National Railways began a through passenger train service on December 5. A freight service in both directions is available daily except Sunday; trains from Senneterre and from Noranda serve all intermediate stations.

**L.M.S.R. Elvanfoot-Wanlockhead Branch to be Closed.**—Owing to decreased traffic the L.M.S.R. will close on and from January 2, 1939, the Wanlockhead branch, which connects at Elvanfoot with the Carlisle-Glasgow *via* Beattock main line. A bus service will give connection, except on Sundays, with passenger trains at Abington to convey passengers to Leadhills and Wanlockhead.

**L.N.E.R. Musical Society Dinner-Dance.**—The L.N.E.R. Musical Society held its second dinner-dance of the season at the Abercorn Rooms, Liverpool Street Hotel, on December 9, under the chairmanship of Mr. Percy Syder, London City Manager. The toast of "The Chairman" was proposed by Mr. A. Burton, and in the course of his reply Mr. Syder took the opportunity of thanking Mr. A. W. Headley for his strenuous work as Honorary General Secretary of the society, a position he had held for 30 years. The evening concluded with dancing to the music of the society's own orchestra.

**Express Freight by Air in Canada.**—Express freight services maintained by Trans-Canada Air Lines have been extended by an arrangement with Prairie Airways, which company connects with the Trans-Canada Montreal-Vancouver route at Regina. From this month, Prairie Airways is adding express freight to the air mails it has previously carried, so that this traffic can now be accepted for transport, *via* Regina, between the Trans-Canada route and the towns of Moose Jaw, Saskatoon, Prince Albert, and North Battleford

served by Prairie Airways. Through rates are quoted.

**Newspapers by Jersey Airways.**—An early-morning newspaper service from Southampton to Jersey is being operated by Jersey Airways during the present winter. It was inaugurated on October 24. Two machines leave Southampton airport daily at 6.0 a.m., conveying between them two tons of papers. In the first nine months of this year the company has carried 9 per cent. more passenger traffic compared with the corresponding period of 1937.

**Temporary Signal Box at Paddington, G.W.R.**—The temporary arrival signal box at Paddington station, to replace the one burnt out on November 25, was brought into use for suburban services last Tuesday—only 18 days after the fire—and will deal also with main line services from Sunday evening next, December 18. Paddington suburban station, temporarily closed for steam trains, was re-opened on December 13, for dealing with the local services which had been temporarily terminated at or started from Westbourne Park station, but it is not yet possible to re-introduce the through G.W.R. local trains to the City.

**Stephenson Locomotive Society Dinner.**—The annual dinner of this society, held at the London School of Economics, on December 10, was attended by 61 members and guests. Proposing the toast of the society, Mr. J. R. Hind, of the British Railways Press Office, spoke of the valuable work of such bodies as ambassadors for the railway cause. The Secretary, Mr. S. H. Beaver proposed "The Guests," to which Mr. B. Adkinson (L.N.E.R.) responded. After dinner, Mr. Hind exhibited several 16-mm. railway films, one of which, representing important train services of the four main lines, was taken in colour by himself.

**Subsidy for Internal Air Lines.**—A Government White Paper issued on December 12 gave a list of eleven air companies operating internal services in Great Britain which are to enter into agreements with the Air Ministry to share in an annual subsidy not exceeding £100,000, payable for five years. This sum is part of the increased subsidy limit of £3,000,000 for civil aviation recommended by the Cadman Committee Report. The companies concerned are:—

Allied Airways (Gandar Dower) Limited; Channel Air Ferries Limited, Isle of Man Air Services Limited; Jersey Airways Limited; Lundy & Atlantic Coast Air Lines Limited; North Eastern Airways Limited; Portsmouth, Southsea & Isle of Wight Aviation Limited; Railway Air Services Limited; Scottish Airways Limited; Western Airways Limited; and Western Isles Airways Limited.

Subsidy may be earned as from January 1 next at the rate of 6d. a ton-mile in the first year, falling by 1d. a year to 4d. in the fifth year, unless the introduction of new types of aircraft should lead the Air Ministry to maintain the rate at

6d. Payment of the subsidy will be contingent upon agreements between the Ministry and the companies requiring that British aircraft, equipment, and staff shall be employed, and that a suitable proportion of the employees shall be present or past members of the Air Force Reserve or the Auxiliary Air Force. Seventy applications for full licences to operate internal air services have been received by the Air Transport Licensing Authority (the formation of which was recorded in our issue of September 23), and hearings began on December 13.

**Automatic Telephone Exchange, Edinburgh Waverley, L.N.E.R.**—A new automatic telephone system was brought into operation by the L.N.E.R. at Waverley station, Edinburgh, on December 12, when the first call was made by Mr. George Mills, Divisional General Manager, who was accompanied by Mr. J. C. L. Train, Engineer, Scottish Area, and Mr. A. Moss, Signal and Telegraph Engineer, Scottish Area. The new system is designed to serve the railway company's private business along with calls to and from the Edinburgh Post Office telephone exchange system as a combined unit, replacing the older system with two distinct exchanges, namely, a railway private exchange and a private branch exchange installed and maintained by the Post Office. This is the first exchange of its kind to be installed with the new Post Office "2000" type selector on any railway. A two-position manual board is provided for dealing with incoming Post Office calls, outgoing Post Office trunk calls, and both-way railway trunk calls to various parts of the L.N.E.R. system. All local inter-departmental calls are, of course, completed automatically. The equipment was supplied and installed by Ericsson Telephones Limited, Beeston, Nottingham.

**New Berlin-Prague-Vienna Service.**—On the night of November 30-December 1 the following service between Berlin and Vienna and Bratislava (Pressburg) *via* Prague came into force. Sundays included (except arrivals at final destinations the times are departures):—

7-27	23-34	Berlin	23-17	6-30
		(Anhalter)		
10-36	2-06	Dresden	20-44	4-05
11-35	3-03	Bödenbach	19-36	2-56
14-10	5-45	Prague	16-58	23-59
		(Masaryk)		
19-36		Bratislava	11-05	
	12-42	Vienna		17-05
		(Fr. Jos.)		

These trains carry first, second, and third class passengers, and there are first and second class sleeping cars on the Vienna trains. On the route followed by these trains there is no Customs corridor arrangement in Czecho-Slovakia, the usual formalities being in force at the various frontiers crossed. These services are not run by "privileged" trains. The principal route between Berlin and Vienna is, however, now *via* Breslau and Zauchtel, and "privileged"

trains are worked over it, passengers using them being free from passport, currency, and customs control. The corresponding night trains are about an hour quicker than those *via* Prague, but others are slower. The Lauchtel route is nearly 90 miles shorter than the third route *via* Leipzig and Passau, and journeys by it take about an hour less, but the Leipzig route is entirely on German soil.

**Railway Club Annual Dinner.**—The thirty-second annual dinner of the Railway Club took place on December 9 at Broad Street Station Restaurant, London. Mr. Kenneth Brown, the President, who occupied the chair, proposed the toast of "The Railway Club, its Officers, and Committee," and discussed the present situation of the railways and their recently formulated demand for a square deal. He also referred with appreciation to the good work carried out during the past year by the officers and the committee. Mr. V. S. Haram responded. Mr. Lambert H. Bailey proposed the toast of "The Visitors" to which

Mr. T. W. Dunkley replied. Mr. D. S. Barrie subsequently exhibited three films of the L.M.S.R. Coronation Scot and scenes on the Highland section of the L.M.S.R.

**Engineers' German Circle.**—The Councils of the Institutions of Civil Engineers and Electrical Engineers have recently extended the support of these institutions to the Engineers' German Circle which, since its inception in 1932, has been supported by the Institution of Mechanical Engineers. One meeting of the circle every session will in future be held at each of these institutions. The first meeting at the Institution of Electrical Engineers will take place on Monday, December 19, when Herr Ministerialrat Gladenbeck, head of the Research Department of the German Post Office, will lecture on "Current Problems in Television Technique in Germany." Visitors are invited to the lecture and further particulars may be obtained from the Secretary of the circle, Mr. E. L. Diamond, at the Institution of Mechanical Engineers, Storey's Gate, London, S.W.1.

### British and Irish Traffic Returns

GREAT BRITAIN	Totals for 49th Week			Totals to Date		
	1938	1937	Inc. or Dec.	1938	1937	Inc. or Dec.
L.M.S.R. (6,831½ mls.)						
Passenger-train traffic...	427,000	433,000	- 6,000	25,321,000	25,337,000	- 16,000
Merchandise, &c. ...	441,000	528,000	- 87,000	22,022,000	24,539,000	- 2,517,000
Coal and coke ...	316,000	332,000	- 16,000	12,344,000	12,738,000	- 394,000
Goods-train traffic ...	757,000	860,000	- 103,000	34,366,000	37,277,000	- 2,911,000
Total receipts ...	1,184,000	1,293,000	- 109,000	59,687,000	62,614,000	- 2,927,000
L.N.E.R. (6,315 mls.)						
Passenger-train traffic...	285,000	296,000	- 11,000	16,419,000	16,533,000	- 114,000
Merchandise, &c. ...	314,000	379,000	- 65,000	15,502,000	16,942,000	- 1,440,000
Coal and coke ...	262,000	292,000	- 30,000	11,631,000	12,304,000	- 673,000
Goods-train traffic ...	576,000	671,000	- 95,000	27,133,000	29,246,000	- 2,113,000
Total receipts ...	861,000	967,000	- 106,000	43,552,000	45,779,000	- 2,227,000
G.W.R. (3,737 mls.)						
Passenger-train traffic...	177,000	181,000	- 4,000	10,658,000	10,738,000	- 80,000
Merchandise, &c. ...	181,000	207,000	- 26,000	9,124,000	9,895,000	- 771,000
Coal and coke ...	112,000	130,000	- 18,000	5,272,000	5,554,000	- 282,000
Goods-train traffic ...	293,000	337,000	- 44,000	14,396,000	15,449,000	- 1,053,000
Total receipts ...	470,000	518,000	- 48,000	25,054,000	26,187,000	- 1,133,000
S.R. (2,140 mls.)						
Passenger-train traffic...	262,000	261,000	+ 1,000	15,876,000	15,894,000	- 18,000
Merchandise, &c. ...	57,000	60,000	- 3,000	2,983,000	3,129,500	- 146,500
Coal and coke ...	34,000	35,000	- 1,000	1,498,000	1,513,500	- 15,500
Goods-train traffic ...	91,000	95,000	- 4,000	4,481,000	4,643,000	- 162,000
Total receipts ...	353,000	356,000	- 3,000	20,357,000	20,537,000	- 180,000
Liverpool Overhead ...	1,296	1,344	- 48	66,169	63,833	+ 2,336
(6½ mls.)						
Mersey (4½ mls.) ...	4,602	4,516	+ 86	215,873	207,122	+ 8,751
*London Passenger Transport Board ...	583,400	570,700	+ 18,700	13,629,600	13,473,500	+ 156,100
IRELAND						
Belfast & C.D. pass. (80 mls.)	1,464	1,608	- 144	120,142	124,181	- 4,039
" " goods	447	460	- 13	21,523	24,005	- 2,482
" " total	1,911	2,068	- 157	141,665	148,186	- 6,521
Great Northern pass. (543 mls.)	8,000	8,150	- 150	537,750	540,300	- 2,550
" " goods	10,300	8,550	+ 1,750	456,500	467,100	- 10,600
" " total	18,300	16,700	+ 1,600	994,250	1,007,400	- 13,150
Great Southern pass. (2,076 mls.)	31,327	29,217	+ 2,110	1,787,767	1,780,258	+ 7,509
" " goods	58,174	53,471	+ 4,703	2,060,194	2,118,451	- 58,257
" " total	89,501	82,688	+ 6,813	3,847,961	3,898,709	- 50,748

\* 24th week (before pooling)

### British and Irish Railway Stocks and Shares

Stocks	Highest 1937	Lowest 1937	Prices	
			Dec. 14, 1938	Rise/Fall
G.W.R.				
Cons. Ord. ...	67½	55½	28	+½
5% Con. Prefce. ....	127	108	77½	+½
5% Red. Pref. (1950) ...	113	109	92½	- 3
4% Deb. ...	113½	102½	99½	+ 1
4½% Deb. ...	118	106	101½	-
4½% Deb. ...	124½	112	106½	- 1
5% Deb. ...	136½	122½	121½	-
2½% Deb. ...	76	64	64½	-
5% Rt. Charge ...	1337½	118	115½	- 2
5% Cons. Guar. ...	133½	116½	105½	- 1½
L.M.S.R.				
Ord. ...	36½	25½	121½	+½
4% Prefce. (1923) ...	82½	65½	26	+½
4% Prefce. ...	92½	77½	46½	+ 1
5% Red. Pref. (1955) ...	107½	102	69½	- 2
4% Deb. ...	108	99½	92½*	+ 2
5% Red. Deb. (1952) ...	117½	111	108	-
4% Guar. ...	104	95½	80½	+ 1
L.N.E.R.				
5% Pref. Ord. ...	121½	65½	41½	+½
Def. Ord. ...	61½	38	2½	+½
4% First Prefce. ...	79½	63	24½	+ 2
4% Second Prefce. ...	31½	21	10	-
5% Red. Pref. (1955) ...	101½	89½	41½	-
4% First Guar. ...	103	91½	69½	-
4% Second Guar. ...	97½	85½	57	+ 3
3% Deb. ...	84½	74	66½*	+ 1
4% Deb. ...	107½	98½	86½*	-
5% Red. Deb. (1947) ...	113½	106½	104½	-
4½% Sinking Fund Red. Deb.	110½	105½	103½*	-
SOUTHERN				
Pref. Ord. ...	98½	83½	57	-½
Def. Ord. ...	27½	16½	12½	-
5% Pref. ...	126½	105½	89½	- 2
5% Red. Pref. (1964) ...	118	110½	100½	-
5% Guar. Prefce. ...	133½	116½	114½	-
5% Red. Guar. Pref. (1957) ...	118½	111½	111½	-
4% Deb. ...	112	101½	97½*	+ 1
5% Deb. ...	135½	123½	118½*	- 2
4% Red. Deb. 1962-67	113	105	104½*	-
BELFAST & C.D.				
Ord. ...	5	4	4	-
FORTH BRIDGE				
4% Deb. ...	106	99½	97½	-
4% Guar. ...	105½	99	96	-
G. NORTHERN (IRELAND)				
Ord. ...	11	5	4	+½
G. SOUTHERN (IRELAND)				
Ord. ...	50	21½	15	-
Prefce. ...	61	34	13	- 2
Guar. ...	94½	69½	34	-
Deb. ...	95	82½	58	-
L.P.T.B.				
4½% "A" ...	123½	110½	109½	-
5% "A" ...	135	121½	117½	-
4½% "T.F.A." ...	108½	104	102½	-½
5% "B" ...	125	114½	114½	-
"C" ...	99½	75	75	- 2
MERSEY				
Ord. ...	42½	22	20	-
4% Perp. Deb. ...	103	96½	95½	-
3% Perp. Deb. ...	77½	74½	67½	-
3% Perp. Prefce. ...	68½	61½	55	-

\* ex dividend

## CONTRACTS AND TENDERS

The L.N.E.R. has placed orders for 170 miles of jute sacking, 14,300 loads of crossing timbers, 400,000 sleepers, 2,110,000 gal. of creosote oil, and 500 tons of linseed oil. The orders have been divided as follow:—

Sacking: A. & S. Henry & Co. Ltd.; A. Watson & Co. Ltd.; Boase Spinning Co. Ltd.; Jute Industries Limited; James Scott & Sons Limited; Thomas Bonar Co. Ltd.; Howe & Brothers (Dundee) Ltd.; T. Wighton & Co. Ltd.; and J. J. Barrie & Co. Ltd.

Crossing timbers and sleepers: Burt Bolton & Haywood Limited; Calders Limited; Canusa Limited; Denny Mott & Dickson Limited; Gabriel Wade & England Limited; and N. Hillas & Co. Ltd.

Creosote oil: Anglo-Scottish Chemical Co. Ltd.; Cameron Warnock & Company; Creosote Producers Association Limited; Thos. Henderson & Co. Ltd.; Low Temperature Carbonisation Limited; John Miller & Co. (Aberdeen) Ltd.; Thos. Ness Limited; Sadler & Company; Scottish Tar Distillers Limited; Shields Ramsay Limited; South Bank Chemical Co. Ltd.; and Sumner & Co. Ltd.

Linseed oil: J. L. Seaton & Co. Ltd.

### New Wagons for L.N.E.R.

During 1939 the L.N.E.R. is to build 3,594 freight wagons. Of these 3,600 will consist of 12-ton mineral wagons with end doors, suitable for conveying coal for shipment in Scotland. There will also be 200 brake vans to replace 200 due to be broken up, 40 fish vans for conveying fish from Grimsby to London, Leeds, Chester, and Lancashire, and from Aberdeen to Lancashire, 50 banana vans to convey fruit from the London Docks to all parts of England, and four carriage trucks for the conveyance of motorcars, theatrical scenery, aeroplane material, and general traffic.

The Chinese Government Purchasing Commission on behalf of the Ministry of Communications, China, has placed the following orders for equipment for the Hunan-Kwangsi Railway to be supplied to the inspection of Messrs. Fox & Mayo:—

Cargo Fleet Iron Co. Ltd.: 60 tons of reinforcing steel bars.

Fellows Bros. Ltd.: Winches and blocks. Francis Theakston (1933) Limited: 30 km. narrow gauge 12 lb. track and 70 sets of switches and crossings.

Ingersoll-Rand Co. Ltd.: Four sets of rod cutting equipment and spares. Holman Bros. Ltd.: Four sets of rod cutting equipment and spares.

Ransomes & Rapier Limited has received an order from the L.N.E.R. for a locomotive wheel drop to be installed at the Ipswich locomotive depot.

Ransomes & Rapier Limited has also received orders from the Crown Agents for the Colonies for one 75-ft. dia. Mundt turntable for 4-ft. 8½-in. gauge, and one similar turntable for combined 4-ft. 8½-in. and metre-gauges, required for the Iraq Railways.

Pritchett & Gold & E.P.S. Co. Ltd. has received an order from the Bombay, Baroda & Central India Railway Administration for 380 alkaline train-lighting accumulators, to be supplied to the inspection of Messrs. Rendel, Palmer & Tritton.

The Gloucester Railway Carriage & Wagon Co. Ltd. has received orders from the Crown Agents for the Colonies for two bogie restaurant cars and one bogie first class sleeping car for the Nigerian Railway. These coaches are to be fitted with Sheffield-Twinberrow bogies.

### Locomotives for New Zealand

The North British Locomotive Co. Ltd. has received an order from the New Zealand Government Railways for a further 10 locomotives for branch line service additional and similar to the 30 recently ordered from this firm, as recorded in the September 30 issue of THE RAILWAY GAZETTE.

The Bombay, Baroda & Central India Railway Administration has placed the following orders for cable for power signalling to be supplied to the inspection of Messrs. Rendel, Palmer & Tritton:—British Insulated Cables Limited, 10,500 yd.; General Electric Co. Ltd., 4,000 yd.; and Callender's Cable & Construction Co. Ltd., 5,000 yd.

D. Wickham & Co. Ltd. has received an order from the Buenos Ayres Great Southern Railway for 35 No. 17a petrol-driven gang trolleys.

The Crown Agents for the Colonies have recently placed the following orders:—

Whitecross Co. Ltd.: Copper wire. C. Richards & Sons Limited: Bolts and nuts. English Drilling Equipment Co. Ltd.: Boring plant.

T. Bolton & Sons Limited: Bronze wire. T. Glenister Limited: Chairs.

Staveley Coal & Iron Co. Ltd.: Cast-iron pipes and fittings.

Stanton Ironworks Co. Ltd.: Cast-iron socket and spigot pipes.

Sir Wm. Arrol & Co. Ltd.: Clear span single track deck railway bridges.

British Copper Refiners Limited: Copper ingots.

W. C. Jones Limited: Cotton waste. Birmingham Railway Carriage & Wagon Co. Ltd.: Drawgear and coupling details for wagons.

English Electric Co. Ltd.: E.H.T. and L.T. switchgear.

Glasgow Expanded Metal Co. Ltd.: Expanded metal.

J. Lysaght Limited: Galvanised corrugated mild steel sheets.

V. & R. Blakemore: Hammers, pickaxes. J. W. Roberts Limited: Locomotive asbestos mattresses.

Steel, Peck & Tozer: Locomotive tyres. Guest, Keen & Nettlefolds Limited: M.S. bars.

Wolverhampton Corrugated Iron Co. Ltd.: M.S. corrugated galvanised sheets.

P. & W. MacLellan Limited: M.S. plates. Callender's Cable & Construction Co. Ltd.: Overhead transmission line.

Phosphor Bronze Co. Ltd.: Phosphor bronze liners.

P. & W. MacLellan Limited: R.S. joists and steel.

United Steel Cos. Ltd. (The United Strip & Bar Mills Branch): Steel mild round.

Wolverhampton Corrugated Iron Co. Ltd.: Steel sheets.

Thos. Firth & John Brown Limited: Steel tyres.

A. Reyrolle & Co. Ltd.: Sub-station switchgear.

General Electric Co. Ltd.: Telephones.

H. W. Ward & Co. Ltd.: Turret lathes.

E. Illingworth & Co. (Bradford) Ltd.: Waste wool.

Craven Bros. (Manchester) Ltd.: Wheel lathe.

Webster & Bennett Limited has received an order from the South Indian Railway Administration, to the inspection of Messrs. Robert White & Partners, for two boring and turning mills.

The L.N.E.R. has just placed contracts for various washing, ironing, and drying machines for use at the company's laundry at Joppa, Edinburgh, and divided as follows:—

Braithwaite & Son, Engineers, Ltd.: Washing machines.

Baker Perkins Limited: Hydro extractors; ironing machine; and shaker tumbler.

D. Henderson Limited: Continuous drying machine.

G. N. Haden & Sons Ltd.: Oil and grease separator.

G. & J. Weir Limited: Boiler feed pumps.

Davidson & Stewart: Steam, hot and cold water, gas and air pipe lines.

The Reading Railroad has ordered 15 diesel shunting locomotives costing \$975,000, states a Reuters New York message.

The Norwegian State Railways Administration has placed an order for 85,000 tons of coal in this country—83,000 tons of Durham screened steam coal and 2,000 tons of Whitehaven steam coal. The prices are 19s. and 19s. 3d. a ton, according to quality, free on board.

The Great Western Railway announces the following works to be undertaken:—

*Kemble*.—Electric lighting is to be installed at Kemble—a station linking such places as Cirencester, Tetbury, Fairford, &c., with express services—in place of the existing petrol-air gas plant.

*Neath*.—Both the pumping plant which supplies water for locomotive purposes at Neath, and the shop machinery in the locomotive and carriage depot there, are steam driven from a stationary boiler. As electricity is available, one of the two steam pumps is to be replaced by an electrically-driven, automatically-controlled, treble-ran pump—the other steam pump being retained as a standby—and an electric motor installed to drive the machinery in the shops.

*Osawetry*.—Structural alterations are to be carried out to afford improved accommodation for the staff employed at the refreshment rooms.

*Bridge Reconstruction at Brecon*.—The bridge carrying the Neath to Brecon double line over Free Street, near Brecon station is to be reconstructed.

*Tar-spraying and Steam Rolling of Roads*.—Authority has been given for the tar-spraying during 1939 of approximately 630,000 square yards of roads in the maintenance of the company, and for steam rolling 120,000 square yards.

Bochumer Verein A.G. has received an order from the Mysore State Railways Administration for 534 locomotive, carriage, and wagon tyres to be supplied to the inspection of Messrs. Rendel, Palmer & Tritton.

The Egyptian State Railways Administration invites tenders, closing on February 18, for 36,000 metric tons of sized coal.

### Address Changes

The offices of the French Railways of Province of Santa Fé will be removed on December 28 to Northgate House, 20-24, Moorgate, E.C.2.

The offices of Quicktho (1928) Limited have been removed to 35, New Broad Street, E.C.2. The telephone number is unchanged.



# DARE WE LET THE RAILWAYS DIE?

It is for *you* to decide.

The Railway industry faces a grave crisis.

The prosperity of the Railways vitally affects *you*. It affects you as a trader, as a ratepayer, as a tax-payer, as a purchaser. It affects the housewife, the retailer, the wholesaler. It affects you in peacetime—but what if war should come?

*Can any means of transport other than the Railways evacuate in 48 hours London's millions, Birmingham's millions, Liverpool's millions, and millions from other danger zones?*

Essential in Peace, vital in War, *dare we let the Railways die?*

The danger signal shines red . . . the Railways have asked the Minister of Transport to *clear the lines*.<sup>\*</sup> They have asked for the right of way to that efficiency upon which the country depends—upon which *you* depend.

They have asked that the shackles of a century may be removed; that out-of-date rules applicable to long vanished conditions should go; *that they should be given the freedom enjoyed by other forms of transport*.

Shall they have this freedom?

IT IS FOR YOU TO DECIDE.

★ ASK FOR A COPY OF "CLEAR THE  
LINES," FREE AT EVERY RAILWAY  
STATION IN BRITAIN. IT CONCERNS  
YOU

ISSUED BY THE RAILWAY COMPANIES' ASSOCIATION

## LEGAL AND OFFICIAL NOTICES

In the Court of the Railway Rates Tribunal.

## Road and Rail Traffic Act, 1933.

## Agreed Charges.

NOTICE IS HEREBY GIVEN that Applications for the approval of Agreed Charges under the provisions of Section 37 of

the Road and Rail Traffic Act, 1933, short particulars of which are set out in the Schedule hereto, have been lodged with the Railway Rates Tribunal.

The Procedure to be followed in regard to the inspection of the said Applications and the filing of Notices of Objections is that published in the *London Gazette* of 28th July, 1936.

Printed copies of the Procedure can be obtained from the Railway Rates Tribunal, Bush House, Aldwych, London, W.C.2.

Notices of Objection to any of the said Applications must be filed on or before the 30th December, 1938.

A copy of each Application can be obtained from Mr. G. Cole Deacon, Secretary, Rates and Charges Committee, Fielden House, Great College Street, Westminster, London, S.W.1, price 1s. post free.

T. J. D. ATKINSON,  
Registrar.

7th December, 1938.

## SCHEDULE

Number of Application	Name of Trader and General Description of Traffic
1938	
No. 753	BITULAC LIMITED, Collingwood Buildings, Newcastle-on-Tyne; Asphalt, Liquid Tar, Petroleum Pitch, etc. (Applicable to traffic consigned by one Associated or Subsidiary Company.)
No. 754	FORD PAPER MILLS LIMITED, Hylton, Durham; Paper.
No. 755	CALOR GAS (SCOTLAND) LIMITED, 1A, Blythswood Square, Glasgow, E.2; Butane Gas.
No. 756	GEORGE DOBIE & SON LTD., Four Square Works, Paisley; Cigarettes, etc.
No. 757	JOHNSON & SONS LTD., Great Yarmouth; Textiles.
No. 758	WIGGINS, TEAPE & ALEX. PIRIE (SALES) LIMITED, Alligate House, 46-58, Mansell Street, London, E.1; Paper ex Hela & Bradluch and Ivybridge. (Applicable also to traffic consigned by one Associated or Subsidiary Company.)
No. 759	GEORGE DOBIE & SON LTD., Four Square Works, Paisley; Cigarettes, etc.
No. 760	LUKE TURNER & CO. LTD., Deacon Street, Leicester; Elastic Webbing.
No. 761	SMITH BROS. & CO. LTD., 110, Praet Street, London, N.W.1; Paper Caps, Capsules and Caps, etc.
No. 762	S. W. HULLAS & SONS LTD., Crown Trunk Works, Corngraves, Cradley Heath; Galvanised Hollow-ware, etc.
No. 763	SHAW & CO., Duffield Mills, Horbury, Nr. Wakefield; Clipped Hearth Rugs.
No. 764	W. R. WILKINSON & CO. LTD., Monk Hill Works, Pontefract; Confectionery.
No. 765	MAUDELLA PATTERNS CO. LTD., 37, Chapel Street, Bradford; Yarns; Paper Patterns.
No. 766	THE ENFIELD CYCLE CO. LTD., Enfield Works, Redditch; Bicycles, Motor Cycles, Motor Mowers, etc.
No. 767	THE CROWN BEDDING CO. LTD., Rother Road, Tyseley, Birmingham; Bedsteads, Bedding, etc. (Applicable also to traffic consigned by three Associated or Subsidiary Companies.)
No. 768	THE GREAT UNIVERSAL STORES LIMITED, Devonshire Street, Ardwick, Manchester, 12; General Stores Wares ex Leeds and Brighouse. (Applicable also to traffic consigned by two Associated or Subsidiary Companies.)
No. 769	POULFON & NOEL LIMITED, Southall, Middlesex; Groceries, Preserves, Provisions, etc.
No. 770	ANGUS WATSON & CO. LTD., Plantation House, Rood Lane, E.C.3; Groceries, Preserves, Provisions, etc.
No. 771	WIGGINS, TEAPE & ALEX. PIRIE (SALES) LIMITED, Alligate House, 46-58, Mansell Street, London, E.1; Paper, etc., ex London. (Applicable also to traffic consigned by two Associated or Subsidiary Companies.)
No. 772	T. BLANNING & SONS, Hallatrow, near Bristol; Butter.
No. 773	THE CITY AND PROVINCIAL STORES LIMITED, Atlantic Mills, Manchester; Clothing, Drapery, and General Stores Wares. (Applicable also to traffic consigned by one Associated or Subsidiary Company.)
No. 774	L. HARRIS LIMITED, 3, Lauderdale Buildings, Aldersgate Street, London, E.C.1; Ladies' Costumes and Coats. (Applicable also to traffic consigned by one Associated or Subsidiary Company.)
No. 775	HENRY MELLOR & SON, Brook's Yard, Market Street, Huddersfield; Woollen and Worsted Cloth.
No. 776	THE SOUTH WESTERN DAIRIES LIMITED, Sherborne, Dorset; Butter, Cheese, etc.
No. 778	J. D. HEWETT & CO. LTD., 98, Leadenhall Street, London, E.C.3; Canned Goods.
No. 779	WILKINSON & WARBURTON LIMITED, Carossa House, King Street, Leeds, 1; Clothing and Textiles.
No. 780	W. J. BROOKES & SONS LTD., Old Trafford, Manchester, 16; Cake.
No. 781	CHIVERS & SONS LTD., Orchard Factory, Histon, Cambs.; Groceries, Preserves, Provisions, etc., ex Bricklayers' Arms and Nine Elms.
No. 782	HENRY ELWIN LIMITED, Plumtree Street, Nottingham; Stationery, etc.
No. 783	GALLAGHER LIMITED, Virginia House, York Street, Belfast; Cigarettes, etc.
No. 784	WILLIAM MARPLES & SONS LTD., Hibernia Works, Westfield Terrace, Sheffield, 1; Engineers' and Joiners' Tools, Hardware.
No. 785	JOHN PITTAM & CO., Augusta Works, Poplar, London, E.14; Boil r Composition.
No. 786	SANDLE BROS. LTD., 51-57, Paternoster Row, London, E.C.4; Books, Stationery, etc.
No. 787	A. H. TUCKER & CO. LTD., Wallbridge Mills, Frome; Cloth, Wool, etc.
No. 788	VEGEDINE LIMITED, Bridge Road, Welwyn Garden City, Herts; Foods for livestock or poultry feeding, etc.
No. 789	WOODWARD, GROSVENOR & CO. LTD., Kidderminster; Carpets, etc.

## SCHEDULE

Number of Application	Name of Trader and General Description of Traffic
1938	
No. 790	BRAND & CO. LTD., Mayfair Works, Vauxhall, London, S.W.8; Groceries, Preserves, Provisions, etc.
No. 791	BRITISH SALES LIMITED (DISTRIBUTORS), Adelaide House, King William Street, London, E.C.4; Preserves.
No. 792	THE DISTRIBUTERS & TRANSPORTERS LIMITED, Unilever House, Blackfriars, London, E.C.4; Margarine, etc., ex Duddingston and Edinburgh; Oleo Stearine ex Glasgow. (Applicable to traffic consigned by two Associated or Subsidiary Companies.)
No. 793	DOVE BROS. (BRISTOL) LTD., Castle Green, Bristol; Paper, Stationery, etc. (Applicable also to traffic consigned by one Associated or Subsidiary Company.)
No. 794	DUNN'S FOOTWEAR LIMITED, Willoughby Lane, Tottenham, N.17; Boots, Shoes, etc.
No. 795	DUNN'S FOOTWEAR LIMITED, Willoughby Lane, Tottenham, N.17; Returned Empties.
No. 796	THE GREAT UNIVERSAL STORES LIMITED; Devonshire Street, Ardwick, Manchester, 12; Furniture, General Stores Wares, etc. (Applicable also to traffic consigned by eight Associated or Subsidiary Companies.)
No. 797	JEFFREYS, MILLER & CO. LTD., Leyland Mills, Wigan; Extract of Malt, etc. (Applicable also to traffic consigned by two Associated or Subsidiary Companies.)
No. 798	STRONG, RAWLE & STRONG LIMITED, 24, Morocco Street, London, S.E.1; Skins, Hides, Pelts, etc.
No. 799	WHITEFIELDS LIMITED, Greengate, London, E.13; Confectionery, etc.
No. 800	RICHARD BONDY LIMITED, 4-5, Bonhill Street, Tabernacle Street, London, E.C.2; Carpets, Rugs, Drapery, etc.
No. 801	MASSON, SEELEY & CO. LTD., Howick Place, Westminster, London, S.W.1; Embossing Machines and Accessories, etc.
No. 802	ALLIED SUPPLIERS LIMITED, 179-189, City Road, London, E.C.1; Multiple Shop Traffic, etc., ex Paddington.
No. 803	ALLIED SUPPLIERS LIMITED, 179-189, City Road, London, E.C.1; Multiple Shop Traffic, etc., ex Broad Street, Somers Town and Commercial Road.
No. 804	ALLIED SUPPLIERS LIMITED, 179-189, City Road, London, E.C.1; Multiple Shop Traffic, etc., ex Bricklayers' Arms and Nine Elms.
No. 805	BAKERS, Codsall, Staffs; Plants, Trees, Seeds, etc.
No. 806	KREMA LIMITED, Moorgate Hall, 153, Moorgate, London, E.C.2; Synthetic Cream.
No. 807	JOHN LINE & SONS LTD., 16, Picardy Place, Edinburgh, 1; Paint and Wallpaper.
No. 808	PREMIER ELECTRIC HEATERS LIMITED, Keeley Street and St. Andrew's Road, Birmingham; Electrical Heating Appliances.
No. 809	M. JACKSON & SONS (CLOTHIERS) LIMITED, 94, Clayton Street, Newcastle-on-Tyne; Cloth, etc.
No. 810	THE PILE FABRIC MANUFACTURING CO. (BRADFORD) LTD., Industry Works, Bradford, Yorks; Furnishing Fabrics.
No. 811	THE SHIELDS ICE & COLD STORAGE CO. LTD., North Shields; Preserved Food, etc.
No. 812	C. F. Taylor & Co. Ltd., Shipley; Knitting Wool.
No. 813	WALSH & CO. (BRISTOL) LTD., Quay Street, Bristol; Clothing. (Applicable also to traffic consigned by one Associated or Subsidiary Company.)
No. 814	T. M. GARDINER LIMITED, Burford Works, Hoddesdon, Herts; Gymnastic and Sports Apparatus, etc.
No. 815	GORDON & PHILLIPS LIMITED, Russell House, Russell Street, Nottingham; Cardboard, etc.
No. 816	J. & X. PHILIPS & CO. LTD., Church Street, Manchester; Drapery and Textiles.
No. 817	UNITED DAIRIES LIMITED, 31, St. Petersburg Place, London, W.2; Butter, Cheese, Cream, Eggs, etc. (Applicable also to traffic consigned by six Associated or Subsidiary Companies.)
No. 818	BUSHELL BROS. LTD., Shanghai House, 8, Botolph Lane, Eastcheap, London, E.C.3; Groceries, Preserves, Provisions, etc.
No. 819	R. THOMAS & CO. LTD., 216, Strand, London, W.C.2; Tea, Coffee, and Cocoa.
No. 820	BRITISH HOME STORES LIMITED, Abbey House, 221-223, Baker Street, London, N.W.1; Earthenware and Glassware.
No. 821	CARRS (BIRMINGHAM) LIMITED, Keeley Street Mills, Birmingham, 9; Paper, etc.
No. 822	LATHAM & CO. LTD., Sutton Place, Hackney, London, E.9; Groceries, etc.
No. 823	PERNELL & SONS LTD., Paulton, near Bristol; Books, Paper, etc.
No. 824	THOMAS WITTER & CO. LTD., 86, York Way, King's Cross, London, No. 1; Brightoleum. (Applicable to traffic consigned by one Associated or Subsidiary Company.)
No. 825	HENRY CORNER & CO. LTD., Taunton, Somerset; Cloth and Clothing ex Cardiff.

## Legal and Official Notices—continued

**The Rehilkund and Kumaon Railway Company Limited**

**T**HE Directors are prepared to receive Tenders for the supply of:—

**LOCOMOTIVE BOILERS,**

as per specification to be seen at the Company's Office.

Tenders addressed to the undersigned, and envelope marked "Tender for Boilers," with the name of the firm tendering, to be lodged not later than Noon on the 17th day of January, 1939.

For each Specification a fee of 10s. will be charged, which cannot, under any circumstances be returned.

The Directors do not bind themselves to accept the lowest or any Tender.

By Order of the Board,

J. WILLIAMSON,

Secretary.

237, Gresham House,  
Old Broad Street,  
London, E.C.2.  
12th December, 1938.

**M**ODEL RAILWAY SPECIALISTS. The Sutton Model Railway Centre, 48, Carshalton Road West, Sutton, Surrey.

**Patents and Designs Acts, 1907 to 1932**

**N**OTICE IS HEREBY GIVEN that Albert Reidinger, of 5, Hurst Road, Winchmore Hill, London, N.21, seeks leave to amend the Specification (including the Drawings) of the Application for Letters Patent No. 491,729 for an invention entitled "Improvements relating to valve gears for steam and other reversible engines."

Particulars of the proposed amendment were set forth in No. 2604 of the "Official Journal (Patents)," published on 14th December, 1938.

Any person, or persons, may give Notice of Opposition to the amendment by leaving Patents Form No. 19 at the Patent Office, 25, Southampton Buildings, London, W.C.2, within one calendar month from the date of publication of the said Journal.

M. F. LINDLEY,  
Comptroller-General.

**Crown Agents for the Colonies****COLONIAL GOVERNMENT APPOINTMENTS.**

**A**PPPLICATIONS from qualified candidates are invited for the following post:—

**SECTION ENGINEER** required for the Nigerian Government Railway for two tours each of 12-24 months, with prospect of permanency. Salary £475-£840 a year. Free passages and quarters and liberal leave on full salary. Candidates, age 23-35, should be Corporate Members of the Institution of Civil Engineers or possess an Engineering degree recognised as granting exemption from Sections A and B of the A.M.I.C.E. examination, and have had practical experience in bridge and reinforced concrete construction. Candidates who are students of the Institution of Civil Engineers and have had the requisite practical experience, are also eligible for consideration. Apply at once by letter, stating age, whether married or single, and full particulars of qualifications and experience, and mentioning this paper, to the CROWN AGENTS for the Colonies, 4, Millbank, London, S.W.1, quoting M/6507.

**RAILWAY AND OTHER REPORTS**

**North Western of Uruguay Railway Co. Ltd.**—Operations for the year ended June 30, 1938, resulted in a loss of £2,007, against net earnings of £23 for 1936-37. Gross receipts were £28,371 and working expenses £30,378. After crediting miscellaneous receipts and charging debenture interest, income tax, &c., the debit balance forward is increased to £75,117. There was a decrease in currency receipts of \$16,963. Passenger traffic improved by \$7,278, but, due chiefly to the continued falling off in Brazilian transit traffic, goods receipts were \$20,573 lower, with 3,720 tons less carried. During the year 10,000 sleepers had to be renewed, at a charge to revenue of \$27,993. Further renewals at the same rate will be required for at least two or three years. As current income does not permit resumption of payments on debenture stocks, the stockholders' committee has sanctioned one year's extension of the moratorium to December 31, 1939.

**Scottish Motor Traction Co. Ltd.**

—This company, in which the London Midland & Scottish and the London & North Eastern Railway Companies have each a large shareholding, earned a profit for the year ended October 31, 1938, of £212,132, after providing for all charges including depreciation, an increase of £62,148 in comparison with the previous year. Dividends from subsidiary companies, interest, &c., amounted to £208,305, against £141,208, making a total revenue of £420,437, an advance of £129,245. Deducting £128,007 for income tax and directors' fees gives a net profit of £292,430, against £198,858 for 1936-37. Adding £76,081 brought in makes a total available of £368,511. The dividend of 6½ per cent., less tax, on the preference shares takes £47,938, sums of £110,000 each are allocated to contingency and general reserves, and £7,582 is written off goodwill. A dividend of 10 per cent., tax free, is recommended on the ordinary shares (requiring £85,843). This compares with 10 per

cent., less tax, paid since the formation in 1932 of the present company. The carry forward is £7,148. The directors also propose to distribute a free share bonus of one ordinary £1 share for every four ordinary shares held.

**United Automobile Services Limited.**—For the year ended September 30, 1938, this company, which is controlled jointly by the L.N.E.R. and Tilling & British Automobile Traction Limited, is paying a dividend of 9 per cent., tax free. For the previous year the dividend was 8 per cent., tax free, on a smaller capital.

**East Kent Road Car Co. Ltd.**

The net profit for the year ended September 30, 1938, of this company, which is controlled jointly by the Southern Railway Company and Tilling & British Automobile Traction Limited, was £59,231, against £62,398 for the previous year. After meeting the preference dividends and transferring £10,000 (the same) to general reserve, the directors recommend a payment of 8 per cent. for the year, the same as for 1936-37, but on a larger capital, leaving £17,193 to be carried forward, against £16,962 brought in.

**Lincolnshire Road Car Co. Ltd.**

Total revenue of this company, which is controlled jointly by the L.M.S. and L.N.E. Railway Companies and Tilling & British Automobile Traction Limited, for the year ended September 30, 1938, was £281,406 against £264,704. After deducting all expenses and providing for depreciation, there is a balance of £25,322 which, added to £10,647 brought forward, makes a total of £35,969 against £33,146. From this has been appropriated £5,000 to general reserve, the same as last year, and £20,000 in payment of a dividend of 10 per cent. for the year, leaving £10,969 to be carried forward. The dividend for the previous year was at the same rate, but required only £17,499. During the year 1936-37, the authorised ordinary capital was in-

creased by £50,000. Certain new businesses have been acquired, and the offices at Bracebridge Heath, Lincoln, have been extended.

**East Midland Motor Services Limited.**

—The profit for the year to September 30, 1938, was £19,268, against £19,203 for the previous year. Adding £10,868 brought in gives a total of £30,136. The dividend of 10 per cent., the same as a year ago, takes £18,750, leaving £11,386 to be carried forward. The company has acquired the freehold of property at Clowne previously held on lease.

**Associated Equipment Co. Ltd.**

A reduction is reported in trade profits from £438,444 in 1936-37, to £377,745 in the year ended September 30, 1937. Miscellaneous receipts were slightly lower. The amount placed to reserve for depreciation is £103,117, against £104,368, the allocation to general reserve is £63,000 against £100,000, and taxation reserve receives £100,000 against £120,000. The dividend for the year is maintained at 7½ per cent. tax free, and the amount carried forward is £262,000, compared with £260,000 brought in.

**Crompton Parkinson Limited.**

Net profit for the year ended September 30, 1938, was £402,046 against £403,864 in the previous year; £70,546 (against £79,232) is brought forward, making £472,592, compared with £483,096 in 1936-37. Of this, £106,419 (against £290,884) is transferred to general reserve and £5,000 (the same) to Central Benevolent Fund. After providing for the dividends on the 8 per cent. first preference and 6 per cent. preference shares (£43,658), there is a balance available of £317,515, out of which a dividend of 15 per cent. for the year is to be paid, requiring £122,945, on the ordinary and "A" ordinary shares, and a special cash bonus of 9d. a share on these shares, requiring £122,944, and this leaves £71,626 to be carried forward. For the year 1936-37 the distribution on both classes of ordinary shares was 12½ per cent.



# Railway Share Market

Although business in the stock and share markets remained at a low ebb, sentiment has been less under the influence of international politics. Partly owing to the good impression created by the Chancellor of the Exchequer's reference to the trade position, markets developed a steadier tone.

Home railway securities reflected the better tendency more than most other sections of the Stock Exchange, largely because of the impression in the City that the major claims of the railways' now well-known "square deal" proposals will be met. The traffic figures, although showing a further substantial decrease, were better than those for the previous week, but they had little or no influence on sentiment. The latter was governed by the hope that the Transport Advisory Council will report favourably regarding the abolition of the existing regulations relating to railway rates for merchandise traffic. Although ordinary and other junior stocks became a better market on Tuesday, chief interest has centred on the preference, guaranteed and prior charges,

which attracted buyers in view of the more general belief that prices have been depressed unduly. It is realised that, despite the heavy traffic decreases this year, guaranteed stocks, and, of course, the debenture issues, remain well covered as to interest and that if the railways' claims are met in regard to merchandise traffic, there will be good prospects of the cover for interest being increased next year. In regard to ordinary and junior preference stocks, however, it would seem that the position would still be mainly dependent on an upturn in general trade conditions.

L.M.S.R. 4 per cent. guaranteed rallied to 80½, and the 4 per cent. debentures at 92½ were also better than at the beginning of the week, while the 4 per cent. preference became a firmer market at 46½, as did the 1923 preference at 27. Buying of L.N.E.R. first preference and second preference was reported at around 26 and 10½, while the first and second guaranteed were better at 69 and 57 respectively. The 4 per cent. debentures were 86½ and the 3 per cent. debentures 66.

Southern deferred was active up to 12½ at one time, but, as in most other cases, best prices touched during the past few days were not fully held. The preferred stock transferred around 57, while the 5 per cent. preference was firmer at 89. Great Western ordinary participated in the better tendency and rallied to 28, while the 5 per cent. preference moved up to 77. London Transport "C" was lower on balance at 74½ despite satisfaction with the past week's traffic.

Argentine railway securities were inclined to show better response to the good crop reports, which relate to maize as well as wheat, and Central Argentine and B.A. Gt. Southern and various other ordinary stocks were reported to be rather more active. Debentures also made moderately better prices in various cases, but preference stocks were rather neglected. Cordoba Central debentures responded to the assumption that the purchase of the line will be finally confirmed in the near future. New York Central, Pennsylvania and various other American railway shares have attracted rather more attention.

## Traffic Table of Overseas and Foreign Railways Publishing Weekly Returns

Railways	Miles open 1937-38	Week Ending	Traffic for Week		No. of Weeks	Aggregate Traffic to Date			Shares or Stock	Prices						
			Total this year	Inc. or Dec. compared with 1937		Totals		Increase or Decrease		Highest 1937	Lowest 1937	Dec. 14, 1938	Yield % (Note)			
						This Year	Last Year									
South & Central America																
Antofagasta (Chili) & Bolivia	834	11.12.38	£ 13,980	-	£ 849	50	735,750	833,340	-	£ 97,590	Ord. Stk.	29	101½	8	Nil	
Argentine North Eastern	753	10.12.38	8,530	-	-	24	246,650	231,870	+	14,780	A. Deb.	191½	6	5½	Nil	
Argentine Transandine	-	-	-	-	-	-	-	-	-	-	93½	60	75	58½	Nil	
Bolivar	174	Nov., 1938	2,901	+	30½	48	40,100	55,650	-	15,551	6 p.c. Deb.	92½	5	8½	Nil	
Brazil	-	-	-	-	-	-	-	-	-	-	Bonds	17	9	5½	91½	
Buenos Ayres & Pacific	2,806	10.12.38	85,670	+	7,508	24	1,727,919	1,877,483	-	149,564	Ord. Stk.	17½	5½	4½	Nil	
Buenos Ayres Central	190	25.11.38	\$80,001	+	\$3,300	22	\$2,571,700	\$2,955,600	-	\$283,910	Mt. Deb.	41½	18	16	Nil	
Buenos Ayres Gt. Southern	5,084	10.12.38	136,600	-	2,730	24	2,923,945	2,946,464	-	22,519	Ord. Stk.	33½	13½	12	Nil	
Buenos Ayres Western	1,930	10.12.38	54,218	+	7,692	24	960,980	1,088,152	-	127,172	"	31½	114	8	N 1	
Central Argentine	3,700	10.12.38	105,124	-	19,178	24	2,417,854	3,022,317	-	404,463	"	34½	10½	10½	Nil	
Do.	-	-	-	-	-	-	-	-	-	-	Dfd.	20½	4½	3½	Nil	
Cent. Uruguay of M. Vidé	972	3.12.38	21,505	+	826	23	399,004	375,550	+	24,054	Ord. Stk.	67½	2	2	Nil	
Cordoba Central	1,218	-	-	-	-	-	-	-	-	-	Ord. Inc.	64½	1½	3	Nil	
Costa Rica	188	Oct., 1938	19,893	-	2,687	18	94,876	101,026	-	6,150	Stk.	38	27	24	85½	
Dorada	70	Nov., 1938	14,390	1,540	48	178,100	170,100	+	8,090	1 Mt. Db.	107	106	105	51½		
Entre Rios	810	10.12.38	14,634	+	1,345	24	365,797	320,400	+	45,397	Ord. Stk.	147½	6	6	Nil	
Great Western of Brazil	1,092	10.12.38	13,600	+	1,300	50	379,100	403,900	+	24,800	Ord. Sh.	34	18	1	Nil	
International of Cl. Amer.	794	Oct., 1938	\$390,826	-	\$49,094	44	\$4,580,780	\$4,780,933	-	\$200,153	1st Pref.	2½	1½	1½	Nil	
Interoceanic of Mexico	-	-	-	-	-	-	-	-	-	-	Stk.	81½	6	7½	Nil	
La Guaira & Caracas	22½	Nov., 1938	3,995	-	870	48	57,105	53,885	+	420	Ord. Stk.	94½	3	2	Nil	
Leopoldina	1,918	10.12.38	24,132	+	3,294	50	1,034,382	1,147,753	-	83,371	Ord. Stk.	91½	6	2	Nil	
Mexican	483	7.12.38	\$253,000	-	\$40,200	23	\$5,999,500	\$6,743,000	-	\$743,500	"	112	14	13	Nil	
Midland of Uruguay	399	Oct., 1938	9,080	+	181	18	34,073	33,073	+	1,008	"	118	12	12	Nil	
Nitrate	383	30.11.38	5,892	+	2,041	48	132,803	139,513	-	6,707	Ord. Sh.	31½	2	1½	51½	
Paraguay Central	271	10.12.38	\$4,808,001	+	\$415,000	24	\$72,891,000	\$78,304,000	-	\$5,413,000	Pr. Li. Stk.	84	79½	57½	55½	
Peruvian Corporation	1,059	Nov., 1938	62,331	-	18,816	22	340,673	427,128	-	83,455	Pref.	14½	4½	2½	Nil	
Salvador	100	3.12.38	\$20,300	-	\$4,950	23	\$282,854	\$293,845	-	\$13,981	Pr. Li. Db.	23½	21½	19½	Nil	
San Paulo	153½	4.12.38	29,375	-	4,510	49	1,498,232	1,574,533	-	76,331	Ord. Stk.	98½	56	32	12½	
Salt	160	Nov., 1938	1,730	-	1,735	22	13,515	16,350	-	2,835	Ord. Sh.	17½	11½	5½	16	
United of Havana	1,353	10.12.38	12,384	-	2,344	24	367,588	390,523	-	22,935	Ord. Stk.	58½	2½	1	Nil	
Uruguay Northern	73	Oct., 1938	1,119	+	157	18	3,900	3,382	+	518	Deb. Stk.	10	2	2	Nil	
Canada																
Canadian National	23,721	7.12.38	705,023	-	46,471	49	34,116,560	37,188,933	-	3,070,373	Perp. Dbs.	77	62½	69½	5½	
Canadian Northern	-	-	-	-	-	-	-	-	-	4 p.c.	101½	94½	101½	35½	Nil	
Grand Trunk	-	-	-	-	-	-	-	-	-	Ord. Gar.	18	74½	6	Nil	Nil	
Canadian Pacific	17,183	7.12.38	586,800	+	15,600	49	26,649,000	27,135,800	-	486,800	Ord. Stk.	18	74½	6	Nil	
India																
Assam Bengal	1,329	10.11.38	50,640	+	4,931	30	891,187	829,318	+	61,869	Ord. Stk.	86	73½	78½	35½	
Barsi Light	202	30.11.38	2,970	+	285	34	95,157	87,202	+	8,955	Ord. Sh.	66½	46	58½	61½	
Bengal & North Western	2,108	20.11.38	72,161	-	14,664	34	368,052	372,225	-	4,173	Ord. Stk.	317	301	284	6½	
Bengal Dockers & Extension	161	30.11.38	4,935	-	281	34	103,949	101,712	+	2,237	"	100	84	87½	71½	
Bengal-Nagpur	3,298	30.11.38	170,850	-	33,743	34	4,495,417	4,592,985	-	97,548	"	101	89	93½	4½	
Bombay, Baroda & Cl. India	3,085	30.11.38	236,550	-	11,325	34	5,671,050	5,757,900	-	86,850	"	113	110½	107½	59½	
Madras & Southern Mahratta	2,967	20.11.38	151,575	+	18,318	32	3,481,983	3,290,762	+	191,221	"	110	105	103½	8½	
Rohilkund & Kumaon	571	20.11.38	12,164	-	280	8	61,762	60,638	+	1,124	"	314	302	287	64	
South Indian	2,531½	20.11.38	101,415	+	1,330	32	2,634,700	2,658,480	-	23,780	"	103½	99½	102½	48	
Various																
Beira-Umtali	204	Sept., 1938	83,497	-	14,556	52	1,037,185	975,721	+	61,464	Prf. Sh.	31/-	3½	-	½	Nil
Egyptian Delta	620	20.11.38	7,252	-	33	32	143,212	153,759	-	10,547	Inc. Deb.	98	93½	90	47½	Nil
Kenya & Uganda	1,625	Aug., 1938	182,150	-	14,527	35	1,860,357	1,920,155	-	59,798	B. Deb.	48½	43½	47	7½	Nil
Manila	-	-	-	-	-	-	-	-	-	-	Inc. Deb.	98	93½	90	47½	Nil
Midland of W. Australia	277	Oct., 1938	17,170	+	421	18	61,856	54,675	+	7,181	"	98	93½	90	47½	Nil
Nigerian	1,900	29.10.38	28,338	-	11,439	31	915,896	1,422,469	-	506,573	"	98	93½	90	47½	Nil
Rhodesia	2,442	Sept., 1938	410,764	-	21,548	52	4,950,384	4,635,398	+	314,986	"	98	93½	90	47½	Nil
South Africa	13,285	19.11.38	621,545	-	53,442	34	20,707,572	21,502,873	-	795,301	"	98	93½	90	47½	Nil
Victoria	4,774	Sept., 1938	757,548	+	28,434	13	2,236,798	2,150,206	+	86,590	"	98	93½	90	47½	Nil

NOTE.—Yields are based on the approximate current prices and are within a fraction of 1½

† Receipts are calculated @ 1s. 6d. to the rupee § ex dividend

The variation in Sterling value of the Argentine paper peso has lately been so great that the method of converting the Sterling weekly receipts at the par rate of exchange has proved misleading, the amount being overestimated. The statements are based on the current rates of exchange and not on the par value